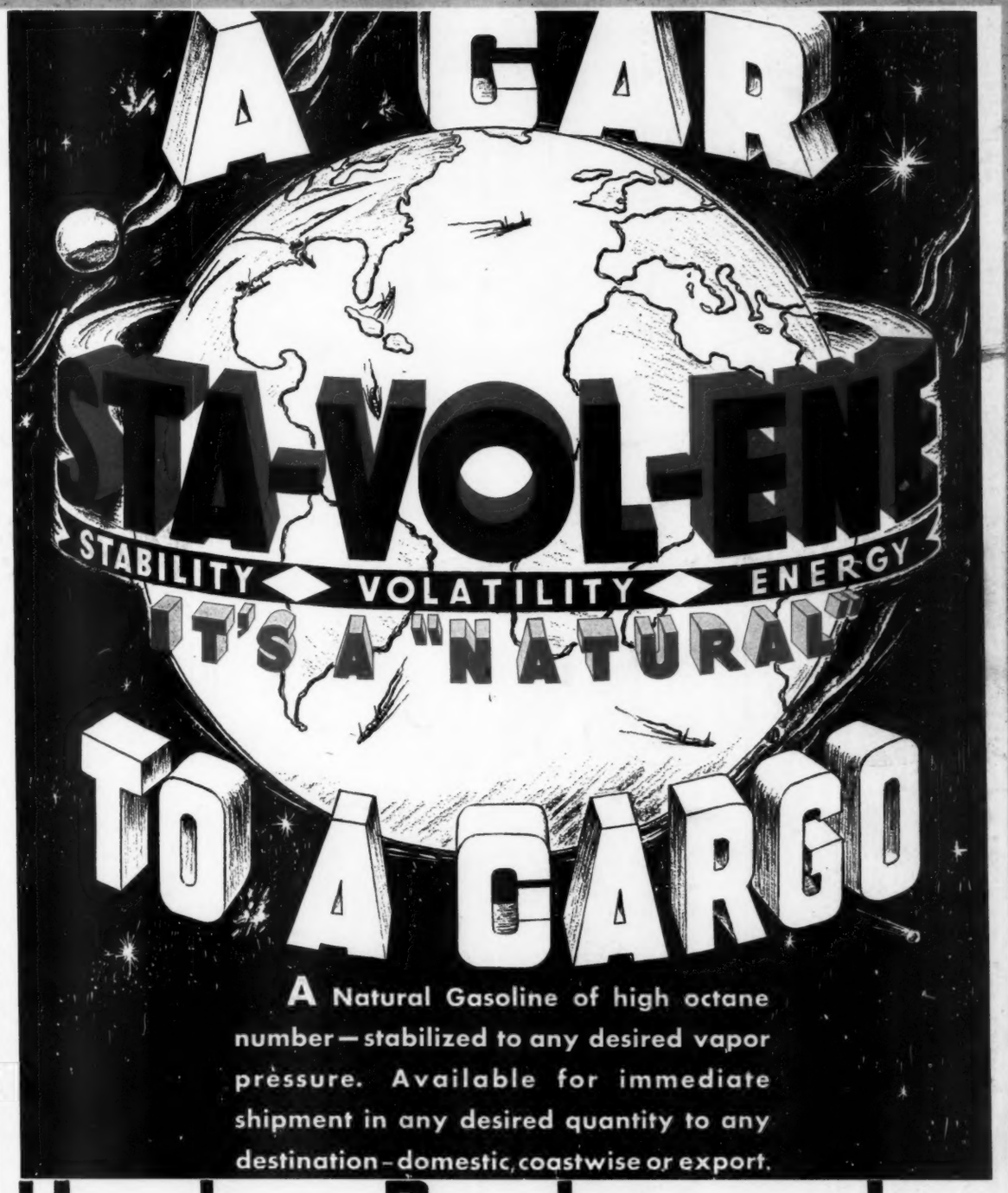
# The OIL AND GAS JOURNAL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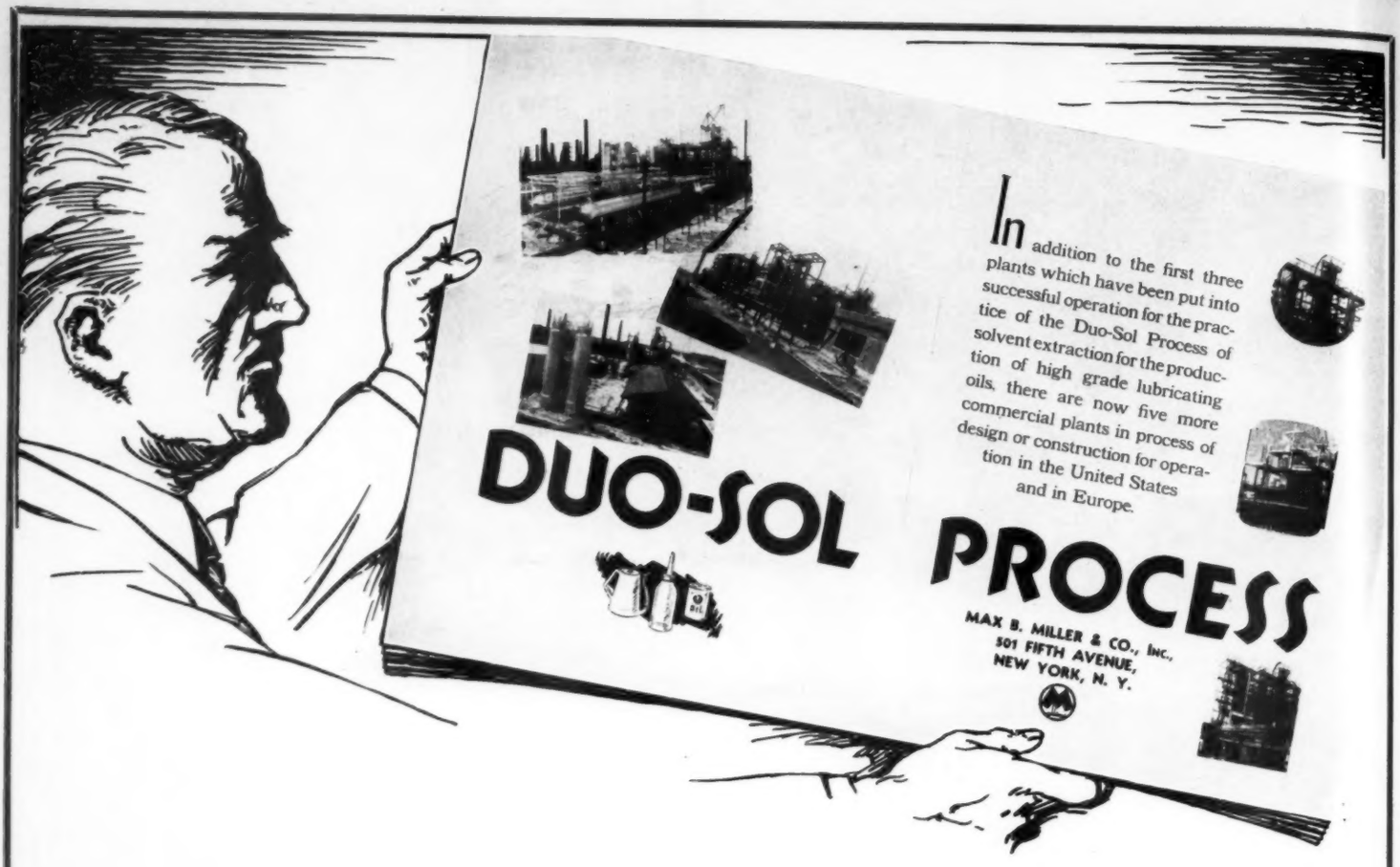
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# THE OIL AND GAS JOURNAL

Volume 34
Number 3

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## OIL MAN'S CALENDAR

### June

7-8—Tulsa, Mid-Continent Group, North American Gasoline Tax Conference, Alvin Hotel.

10-11—Fargo, N. Dak., Northwestern Petroleum Association, North Dakota Division.

16-21—White Sulphur Springs, W. Va., Society of Automotive Engineers, summer meeting, Greenbrier Inn.

19-21—Cincinnati, Ohio, American Society of Chemical Engineers.

20-21—State College, Pa., Pennsylvania Grade Crude Oil Association, annual meeting.

24-28—Detroit, Mich., American Society for Testing Materials, annual meeting, Book Cadillac Hotel.

### August

(?)—American Petroleum Equipment Suppliers' Association, place to be named later.

19-24—San Francisco, Calif., American Chemical Society.

### September

4-5—Louisville, Ky., Kentucky Petroleum Marketers Association.

18-20—Hot Springs, Ark., North American Gasoline Tax Conference.

18-20—Atlantic City, N. J., National Petroleum Association, annual meeting, Hotel Traymore.

### October

11-12—Houston, Tex., mid-year meeting of Petroleum Division of A.I.M.E.

14-18—Louisville, Ky., National Safety Council, twenty-fourth annual safety congress.

14-18—Atlantic City, N. J., American Gas Association, Manufacturers Division.

14-19—Oklahoma City, Okla., National Tax Association, Oklahoma Biltmore Hotel.

### November

4-5—Dallas, Tex., I.P.A.A. annual convention.

11-14—Los Angeles, Calif., American Petroleum Institute, sixteenth annual meeting, Biltmore Hotel.


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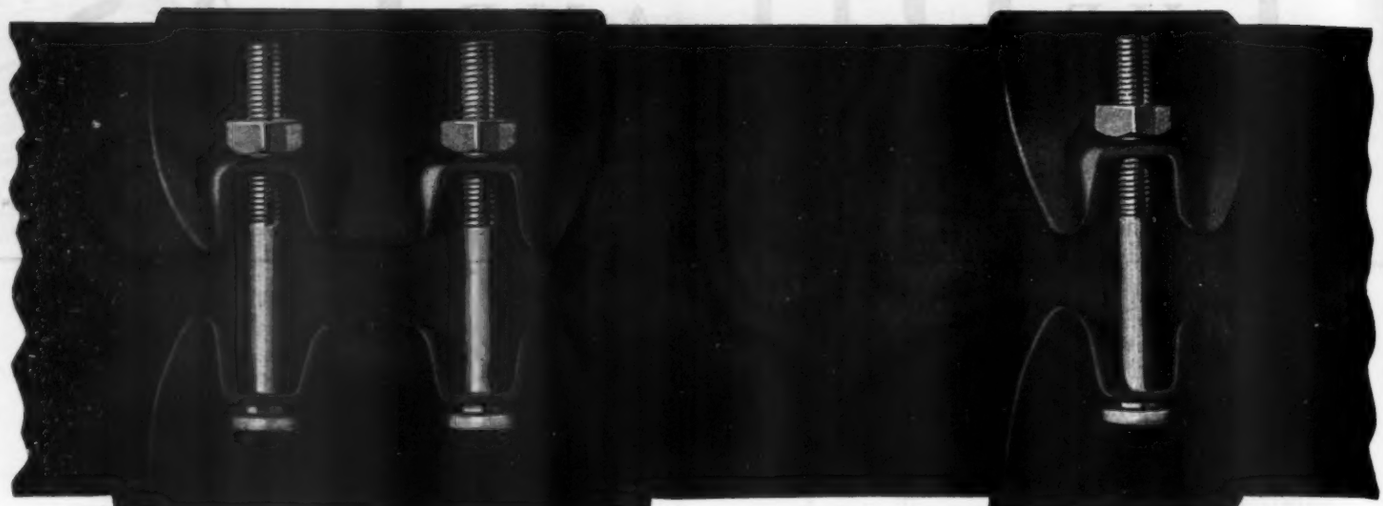

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# Increased Wildcatting Throughout Country Best Sign Conditions in Oil Business Are Better

By ANDREW M. ROWLEY

BETTER conditions in the petroleum industry and a well founded belief that a continuance of efforts to maintain the proper balance between supply and demand both of crude oil and gasoline will result in an upward readjustment of price schedules is reflected in field operations throughout the country. Since the beginning of the industry the best barometer of basic conditions has been the activity of the wildcatters. These frontiersmen of the business fold up their tents and go fishing when the industry is slumping but usually they are the first to sense any improvement and immediately begin to get busy.

Study of field reports from every section of the country shows increasing activity in wildcat operations. Removal of the red tape incident to Federal regulations, orders and interpretations made under the petroleum code possibly is a factor in increasing operations at this time. But the fact there is very little, if any, surplus crude available to markets and that purchasers for a long time have been especially anxious to connect with production where pipe line facilities are available, is the prime reason for the growth in development work and gain in the number of operations.

The industry is becoming more convinced the State of Texas is doing a good job in enforcing its rules and regulations in East Texas and the removal of uncertainty regarding this field is a most important feature of the general situation. Increasing water production in East Texas is a factor many in the industry have not considered in its true significance. Some wells in that field are reported pumping 900 barrels of water and 22 barrels of oil per day. The removal of 900 barrels of water from the reservoir has exactly the same effect on bottom hole pressure as taking out 900 barrels of oil, consequently, as the output of water increases, the total water production should be added to total oil production in all calculations regarding decline in bottom hole pressure.

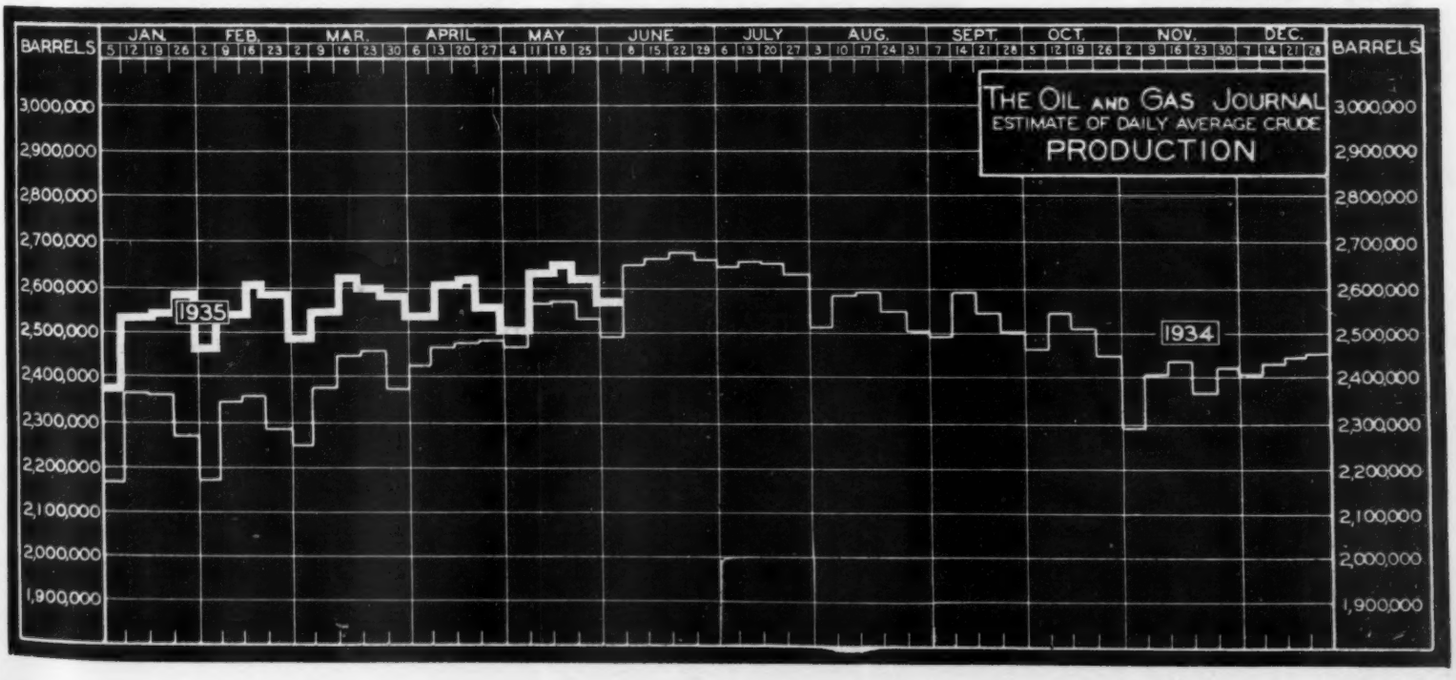
Michigan is a good example of the spread and increase in drilling activity throughout the country. In that state there are 200 strings of tools in operation at this time. With refinery facilities being increased in Michigan and good production being procured from wells completed, the industry is directing more attention to this section. Southwest Texas, New Mexico and Western Kansas are other areas getting an especially good play with every indication pointing to continued activity in these sections throughout the year. The Amerada Petroleum Corporation's latest completion in the Monument Pool in New Mexico flowed 1,061 barrels in two hours. Completions of large producers in scattered areas in Oklahoma are responsible for additional drilling activity in that state.

## Crude Oil Production in the United States

Estimated daily average production for the week ending June 1, a comparison with previous week and the Federal allowables follow:

| | | Federal allowable | |
|---|---|---|---|
| | June 1 | June | May 25 |
| Oklahoma— | | | |
| Oklahoma City | 138,950 | ..... | 160,575 |
| Seminole-St. Louis | 99,075 | ..... | 101,400 |
| Remainder of State | 256,750 | ..... | 261,675 |
| Total Oklahoma | 494,775 | 514,200 | 523,650 |
| East Texas— | | | |
| Lathrop | 160,537 | ..... | 163,367 |
| Kilgore | 154,723 | ..... | 153,938 |
| Joiner | 152,837 | ..... | 155,620 |
| Total East Texas | 468,097 | ..... | 472,925 |
| West Texas | 151,075 | ..... | 143,742 |
| North Central Texas | 84,610 | ..... | 91,507 |
| Texas Panhandle | 62,523 | ..... | 60,525 |
| East Central Texas | 47,375 | ..... | 48,634 |
| Gulf Coast—Texas | 178,473 | ..... | 180,490 |
| Southwest Texas | 59,050 | ..... | 58,330 |
| Total State of Texas | 1,051,203 | 1,059,300 | 1,056,153 |
| Kansas | 153,225 | 154,300 | 152,900 |
| North Louisiana | 23,185 | ..... | 23,160 |
| Gulf Coast—Louisiana | 115,927 | ..... | 111,628 |
| Total Louisiana | 139,112 | 132,300 | 134,788 |
| Arkansas | 31,190 | 30,700 | 31,140 |
| Eastern Fields (except Michigan) | 105,000 | 103,700 | 105,000 |
| Michigan | 40,326 | 36,800 | 39,075 |
| Rocky Mountain area | 100,140 | 107,000 | 98,270 |
| California— | | | |
| Santa Fe Springs | 35,500 | ..... | 36,000 |
| Long Beach | 58,500 | ..... | 64,000 |
| Mountain View | 15,250 | ..... | 7,200 |
| Elwood | 12,250 | ..... | 12,000 |
| Kettleman Hills | 51,500 | ..... | 53,100 |
| Remainder of State | 297,000 | ..... | 311,700 |
| Total California | 470,000 | 512,700 | 484,000 |
| Total United States | 2,584,971 | 2,651,000 | 2,624,976 |

**Decrease 40,005 Bbls. Daily.**



# The Bulletin Board

***Seventeen Million Dollars'*** worth of construction work is now in progress among refineries in the United States. The bulk of the expenditures is going into cracking equipment with a substantial sum being spent for solvent refining and dewaxing units.

•

***Confiscation of Hot Oil*** in East Texas is continuing with the courts authorizing sales which have been made at about 40 cents per barrel. A purchasing corporation is proposed by those desiring to keep these sales, running into several millions of barrels, from being made at prices low enough to affect existing price structures.

•

***Oil Jobbers*** will meet in Washington June 17 upon invitation of the National Oil Marketers Association to discuss future plans in view of the decision of the Supreme Court invalidating codes.

•

***California Production*** will continue to be curtailed on a strictly voluntary and co-operative basis as the Oil Producers Agency has decided not to make any further attempt to secure passage at this session of the legislature of the bill it sponsored designed to provide a means for forcing compulsory curtailment. A minority succeeded in getting a senate committee to table the measure.

•

***The World's Deepest Well,*** the Gulf Production Co.'s No. 103 McElroy, Upton County, Texas, is bottomed at 12,786 feet while tests are being made in the well to obtain formation data for use as a guide in further deep drilling in that area.

•

***Natural Gas Transmission*** through West Texas, New Mexico and Arizona presents a number of problems which require special operating practices such as the installation of treating plants to purify the gas of its hydrogen sulphide content which amounts to 300 grains per 100 feet of gas.

•

***Gulf Coast Production*** practices have been developed to solve many problems peculiar to operations in that territory, one of the latest being the use on low pressure equipment of a discharge valve similar to those on high pressure separators.

•

***The Chlorex Solvent*** refining unit of the Bradford-Penn Refining Co. has been placed on a routine operating basis and is charging an average of 500 bbls. of raw stock daily.

***The P. and C. Committee*** decided to maintain its personnel until after a meeting on June 14 at which time further consideration will be given to the present situation and the possibility of any legislation which might make it advisable to continue the present setup.

•

***Oil Company Earnings***, based on reports of 29 companies, showed a return of approximately 2.7 per cent in 1934 as against 1.3 per cent in 1933. Companies engaged chiefly in producing crude oil made more favorable comparisons with 1933 than did those interested in refining and marketing. With a 21 per cent increase in gross revenues, net income increased approximately 90 per cent.

•

***Taxing Chain Stores*** will be a subject submitted by the California legislature in an election to be held this fall as a guide for designing specific tax bills to be submitted during the 1936 session of the legislature. The chain store tax is understood to automatically apply to filling stations.

•

***Foreign Refiners*** continue to increase the capacity of their plants and considerable cracking equipment is being installed now. Two foreign plants are being expanded so that each will be able to process up to 175,000 bbls. of crude oil daily.

•

***Conservation of Natural Gas*** reserves is being furthered by companies through installations of equipment calculated to prevent losses in production and transmission of this valuable fuel.

•

***East Texas Overproduction*** last week was estimated at about 31,000 barrels daily, an increase of about 9,000 barrels daily over the previous week although operators in the field believe enforcement is becoming more stringent. Runs to refineries increased 8,000 barrels daily and refined shipments were 419 cars more than during the previous week.

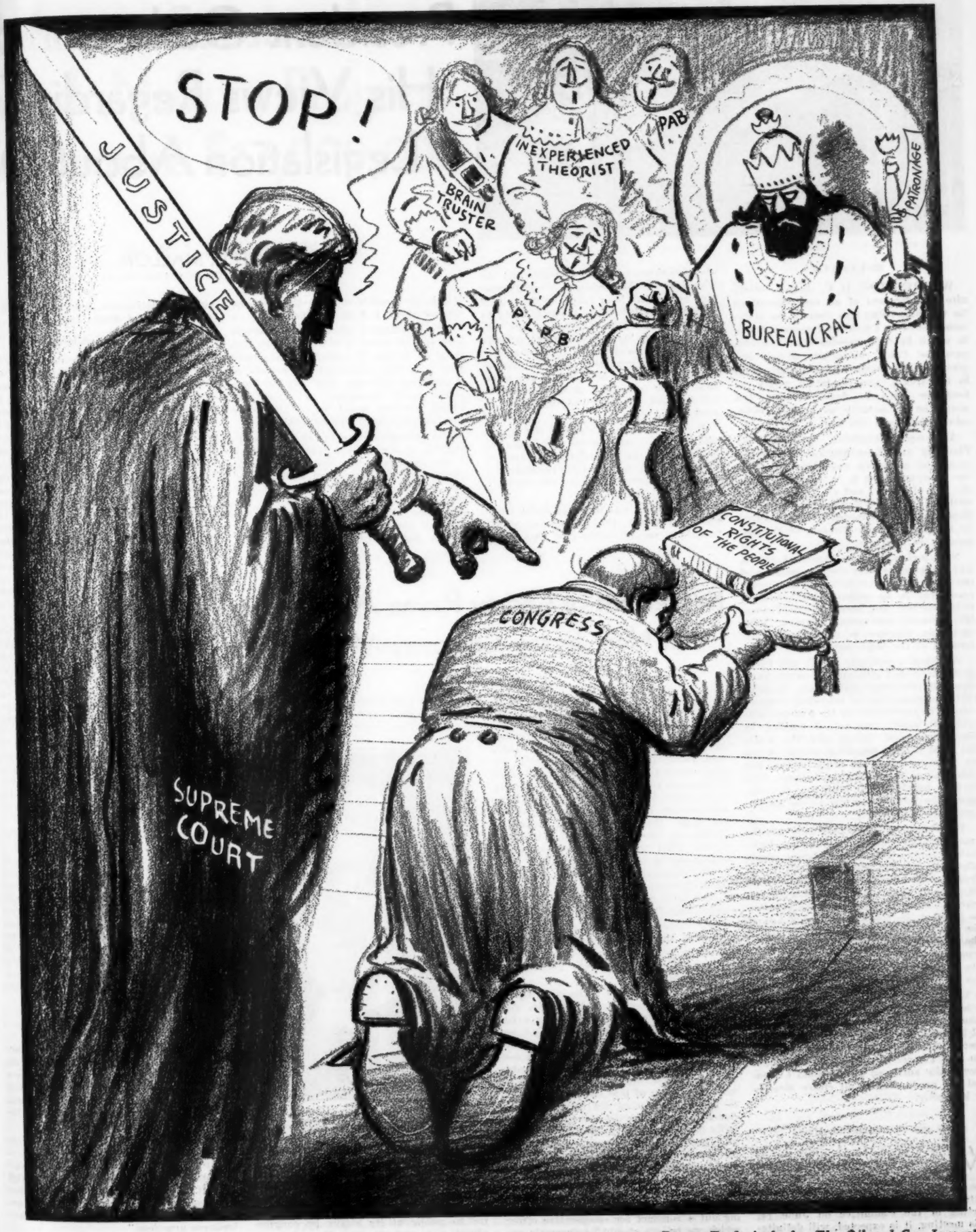
•

***Blowout Prevention*** and control have made important advances in production operations with operators becoming more conversant with the factors chiefly responsible for the trouble and with practices which will guard against blowouts.

•

***Christy Payne,*** vice president, treasurer and director of the Standard Oil Company (New Jersey) resigned after 40 years service with the company. For years he was in charge of all the natural gas operations of the Jersey company.

# *Caught in the Act*




*—Drawn Exclusively for The Oil and Gas Journal.*

# President Outlines His Views Regarding Legislation About Oil

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

**BULLETIN**

**WASHINGTON, D. C., June 4.—Definite abandonment of all code operations for the time being was seen in the statement issued by President Roosevelt today in which he recommended that Congress pass the Clark resolution, already approved by the Senate and awaiting action in the House. The resolution would extend the NRA to April 1, 1936, but would be inoperative as regards codes established under the act.**

**All code authorities, including the Planning and Co-ordination Committee, would be abolished under the terms of the provisions, but it is understood that the life of the P. and C. Committee, as well as the Petroleum Administrative Board, will be attempted to be continued by amendment to the Thomas oil bill now pending in Congress.**

**New legislation, the President stated, will be necessary for the continuance of the PAB, which legislation is now under consideration, he added. This reference, it is believed, was aimed at the Thomas bill, general consensus, however, being that this measure is outlawed by the decision of the Supreme Court.**

**Speaking specifically of oil, the President stated that although six of the principal oil producing states have signified their acceptance of an interstate compact subject to ratification of the Federal Government, which compact, if ratified by the Government, would give the states the right to set production quotas, it has no force or effect in other states. For this reason the President believes that further legislation is necessary to safeguard the interests of the states not entering the agreement.**

**The President stated that although the compact states wanted no further legislation, there were a good many people who did. Further legislation, the President stated, if passed by Congress, would be brought into play only in case the compact fails. In answer to the question as to what the result would be if one of the states should overproduce he stated that the power vested in the Federal Government would be directed only against the recalcitrant state and not against all the oil producing states.**

**The President would not indicate what type of legislation, if any, he had in mind for the regulation or control of the oil industry, but numerous attorneys connected with the industry are of the opinion that the recent decision of the Court specifically outlawed all attempts to control the production of oil either directly or indirectly.**

---

**P. and C. Committee Meets**

**WASHINGTON, D. C., June 3.—At a meeting of the Planning and Coordination Committee Monday it was decided that the employes of the committee should be kept on duty until a meeting of the committee on June 14. This meeting, it is expected, will definitely deal with the situation, probably by** the abolishment of the committee and the dismissal of the employes if no legislative action has been taken by then. This action, many believe, is the only thing to be done under the decision of the Supreme Court, but there is some support for the continuation of the committee, although it is generally conceded that no positive action can be taken by any members of the committee or by the personnel without the sanction of a law of some kind.

It was decided in view of the uncertainty now existing as to the legislative program of the administration and of Congress that no definite recommendation as to future plans for the industry was yet advisable.

The industry was urged to make every effort to retain the advantages which have been gained in the past two years, this being possible only by the co-operation of every unit in the industry.

Best information reaching headquarters here is that there is now little chiseling going on in the oil industry. There have been no recent complaints or reports to Washington showing that any oil companies have attempted to chisel, cut wages, advance hours, or in any other way interfere with orderly business.

The only possibility for an increase in hours is in the drilling branch, in which it has long been the contention of employes actually engaged in drilling that they should be allowed to work longer hours than the number specified in the code. The lengthening of the hours of labor of these employes would not result in any decrease in expense to the drilling contractors, but would result in the advance of wages to employes.

**Question of Allocations**

The only disadvantage to the oil industry, it is said, would be in the discontinuance by the Planning and Coordination Committee and the petroleum administration of allocations of gasoline production and crude oil production by districts, but it is believed this will be overcome by action by the President and Congress.

It is generally anticipated also that the President will indirectly ask that provision be made for voluntary agreements among trade and industry, as provided in Section 4(a) of the National Industrial Recovery Act. The 10 per cent of chiselers in all business, President Roosevelt's principal objection to voluntary codes of air competition, have not been so apparent in the oil industry during the several months' performance under the oil code in voluntary compliance.

The benefits which have been derived under the refinery control and production control provisions of the code should be perpetuated in the opinion of numerous members of the industry who have gathered here to attend meetings of the Planning and Coordination Committee. Whether this activity can be continued under the sanction of Section 4(a), in an enlarged form, is unknown, but it is anticipated if this section is re-enacted, or enlarged, that these activities can be performed. If this action is taken, it is generally agreed that the stabilization work which has been undertaken by C. E. Arnott can be continued.

If gasoline production allocation, on which is based crude oil production, is continued it will be almost mandatory that the stabilization of retail markets which has been started under the direction of Mr. Arnott will be continued. Some members of the staff of the Planning and Co-ordination Committee state that the position of the various stabilizing factors in the oil industry should be first, gasoline allocations; second, crude oil allocations; and third, the stabilization activity of C. E. Arnott as it applies to retail markets.

---

# Retirement of Christy Payne Announced at New Jersey Company Meeting

By C. O. WILLSON

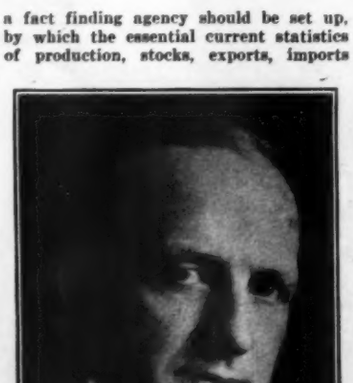
NEWARK, N. J., June 4.—Suspension of the NRA should not make any basic changes in the operations of the oil industry Walter C. Teagle, president of the Standard Oil Co. (New Jersey), told stockholders at the company's annual meeting here today. Mr. Teagle said it was not the intention of the company to increase hours of employment or reduce wages and salaries and expressed the hope that the industry generally would not take advantage of the ending of the NRA to resume practices which are conceded to be undesirable.

The company in its annual statement made it clear that it favors state rather than federal control for the oil industry. Regarding this the statement said in part:

"Since 1921, the failure of the industry to earn an adequate return upon its investment has been directly attributable to overproduction.

"Believing that under the constitution the remedy for this condition lies primarily with the states, we have consistently urged the enactment and rigid enforcement of state laws preventing wasteful producing practices, promoting economical operation and making possible the maximum ultimate recovery. Adequate measures of this character are now in effect in most of the important producing states, and these, with the Connally law, passed by the present Congress and prohibiting interstate movement of oil produced in violation of state law, should maintain a reasonable balance between production and consumptive demand.

"Furthermore, the states are now working out a compact for co-operative effort which we believe should be promptly approved by Congress. Coupled with this, a fact finding agency should be set up, by which the essential current statistics of production, stocks, exports, imports



CHRISTY PAYNE

and market demand can be accurately and impartially determined.

"Proposals continue to be made contemplating the more or less complete regimentation of the industry under federal control, the conversion of the industry to public utility status by congressional fiat, and the like. It is believed

(Continued on Page 32)

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**A.P.I. DIRECTORS TO MEET**

**NEW YORK, June 4.—A special meeting of the board of directors of the American Petroleum Institute has been called for Wednesday, June 5, at New York to consider the situation arising from the Supreme Court decision on the N.R.A.**

**In his call for the meeting, President Axtell J. Byles said:**

**"It is assumed that no one will disturb the present status of employes with respect to wages and hours. It is further assumed that all operations will be conducted in conformity with sound and fair business practices."**

**The refinery situation will be considered at a meeting in Chicago June 6.**

# Refinery Construction Work Now in Progress to Require $17,000,000

By W. T. ZIEGENHAIN

Approximately $17,000,000 worth of new construction is now in progress among refineries of the United States and considerably more than this amount is on the drafting boards of refining and refinery equipment companies. The stability of gasoline prices over the past year and the resumption of favorable operating balance sheets has encouraged refiners to modernize their equipment and in some areas to increase capacities.

As shifts are made in the sources of crude oil there is a constant shifting of refining capacity and the finding and developing of the East Texas oil field certainly was no exception. Approximately 200,000 bbls. of new refining capacity was built in the East Texas area in the past four years and this came at a time when more than one-third of the total capacity of the country remained idle. Much of this new construction was of a temporary nature, however, and included the use of much salvaged materials. The operation followed the simplest forms of procedure and as long as local crude could be purchased at an unreasonably low figure it was possible to move the products at a correspondingly low price and this in turn withheld permanent refinery construction elsewhere.

### Conditions Changed

In the past year there has come a decided change in the East Texas refining situation, however, and a number of plants have been forced to close down for lack of crude. The stronger and better established units turned to cracking as a means of increasing the recovery of gasoline, and to improve the antiknock value of the product. The trend in East Texas among refiners is definitely toward fewer but larger units, equipped with cracking and vapor recovery facilities.

With East Texas working its way into the background, refinery and retail gasoline prices generally are able to support dollar crude and refinery operations are yielding a small margin and there is a willingness on the part of refiners to again consider making improvements in equipment and methods of operation.

### Forty Per Cent Obsolete

At least 40 per cent of the present refining capacity is obsolete when considered from the light of the improvements that are available to reduce operating costs but the operator cannot always justify installing new equipment on this basis alone. The old investment cannot be written off these days as fast as it becomes obsolete and in a majority of instances the refiner has had to just hit "the high spots."

Two major developments which have attracted the interests of refiners and for which large amounts of money are being spent include the installation of combination crude distillation and cracking units to replace the conventional dual still arrangement and the installation of solvent units for the separation of the paraffinic and asphaltic hydrocarbons and for dewaxing. The latter are restricted to those plants manufacturing lubricants so that the field is limited to about 80 refineries or less than one-fifth of the total number now operating. It has been estimated that approximately $5,000,000 will go into solvent refining plants during 1935. While the amount to be spent for solvent dewaxing plants is indeterminate, it will probably reach a figure between $1,000,000 and $2,000,000 for the year. Because refiners are replacing conventional methods with solvent units on such a broad scale and with large plants, approximately 40 per cent of the needs for lubricating oils may be filled by solvent refined oils within the next year.

### Future Work

It goes without questioning that as refiners see fit to replace their present crude distillation units and cracking equipment they will try to time the replacements to permit installing combination units. It is also likely that solvent refining will replace present practices as the old is worn out but there will also be modifications of the present practices of solvent refining that will permit a wide range of operations. The inclusion of solvent dewaxing along with solvent refining and use of propane as a combination selective solvent and dewaxing medium hold strong arguments in its favor. There remains to be solved the question of whether the solvent treatment of a long resid is preferred to fractional treatment, whether the easily dewaxed or the difficultly dewaxed oils are preferable as lubricants, or whether refining may be replaced to some degree by adding materials to the lubricating oils as made by conventional methods in the form of pourpoint suppressors, V.I. improvers, etc.

### Future Needs

In the more distant future refiners may see the need of installing equipment for the manufacture of a fourth kind of gasoline, polymer motor fuel, to augment his present production of straightrun, cracked and vapor recovery gasolines. This material has an antiknock value of 82 or better, has an antiknock blending value equal to iso-octane and has proved acceptable on commercial scale operations as a motor fuel without blending. A 3,000,000-foot per day cracked gas polymer unit is in operation in a Chicago refinery at present and is producing better than 5 gallons of 82 octane motor fuel per 1,000 feet of gas handled and other units are definitely projected for building in other plants. The effect of the installation of polymer units will be to eliminate some of the work done by the present gasoline absorption systems in refineries.

### Dehydrogenation Next

Another step in this direction is the dehydrogenation and polymerization of natural gas which if found successful would lead to the erection of units in the producing field and it is not without the realm of reasoning to picture such a unit being built in the Panhandle or in one of the California fields where there is a large volume of gas and where there is a ready market for high antiknock blending materials.

## Principal Refinery Construction Work

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| Atlantic Refining Co. | Philadelphia, Pa. | New clay treating towers |
| Cities Service Ref. Co. | E. Braintree, Mass. | Combining topping and cracking units |
| Gulf Refining Co. | Port Arthur, Tex. | Furfural plant |
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| Fair, Ralph | Harlinger, Tex. | Distillation unit |
| Home Oil & Refining Co. | Great Falls, Mont. | Cracking unit |
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| International Refining Co. | Sunburst, Mont. | Modernizing and enlarging plant |
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| Pentagon Refining Co. | Plymouth, Mich. | New refinery |
| Petrol Corp. and Fletcher Oil Co. | Los Angeles Harbor, Calif. | Terminal |
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| Shell Petroleum Corp. | Wood River, Ill. | New solvent refining unit |
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| Shell Petroleum Corp. | Houston, Tex. | Revamping stabilizer |
| Shell Petroleum Corp. | Arkansas City, Kans. | Revamping cracking units |
| Skelly Oil Co. | El Dorado, Kans. | Modernize cracking unit |
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| Standard Oil Co. of Cal. | Richmond, Calif. | Revamping distillation and lub oil plants |
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Note: Although construction work awaits approval of plans by executives of the Pan American Refining Co., the company's Texas City plant may be materially increased in size before the close of the year. The present plant is easily able to process 25,000 bbls. of crude daily and a duplicate unit may be added to double the plant's capacity.

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By C. O. WILLSON

Refining companies abroad have undertaken a large program of plant construction, designed to modernize older units and in some instances the work will represent substantial expansions. Particular attention is being given to cracking and in the same manner as refiners in the United States, foreign operators are favoring the use of solvents for manufacturing lubricants where new capacity is added.

There is a wide distribution in the locations at which refining plant improvements are being made and includes the following:

### Partial List of Foreign Refinery Construction Work

The Compania Nacional de Petroleos (Standard of New Jersey) at Campana, Argentine, refinery is replacing equipment destroyed by fire last year. This includes a 6,500-bbl., two-stage atmospheric distillation unit, new boiler house and storage tanks.

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The Nederlansche Koloniale Petroleum Maatschappij, N.V. (Standard-Vacuum Oil Co.) at Soengei-Gerong, Sumatra, Dutch East Indies, is increasing the plant capacity from 25,000 to 35,000 bbls. daily with other phases of the plant's operations enlarged.

Italian subsidiaries of the Standard Oil Co. of New Jersey, Royal Dutch-Shell, Socony-Vacuum Oil Co., Inc., and the Azienda Generale Italiana Petroli (A.G.I.P.) are completing plans to enlarge and modernize their refineries in Italy. Some work has already been done but major programs await final regulations of Italian government which plans to build up a refining industry with large enough capacity to supply domestic requirements for petroleum products. Estimated that new facilities sufficient to handle 40,000 bbls. of crude oil daily will be built. Improvements will include cracking units and facilities to manufacture complete line of lubricating oils.

Manchukuo Oil Co. is building a new refinery of 5,000 bbls. daily capacity at Dairen, Manchuria.

In the U.S.S.R., cracking facilities are being modernized and enlarged at three refineries. Other general improvements are under way.

# President Outlines His Views Regarding Legislation About Oil

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

**BULLETIN**

**WASHINGTON, D. C., June 4.—Definite abandonment of all code operations for the time being was seen in the statement issued by President Roosevelt today in which he recommended that Congress pass the Clark resolution, already approved by the Senate and awaiting action in the House. The resolution would extend the NRA to April 1, 1936, but would be inoperative as regards codes established under the act.**

**All code authorities, including the Planning and Co-ordination Committee, would be abolished under the terms of the provisions, but it is understood that the life of the P. and C. Committee, as well as the Petroleum Administrative Board, will be attempted to be continued by amendment to the Thomas oil bill now pending in Congress.**

**New legislation, the President stated, will be necessary for the continuance of the PAB, which legislation is now under consideration, he added. This reference, it is believed, was aimed at the Thomas bill, general consensus, however, being that this measure is outlawed by the decision of the Supreme Court.**

**Speaking specifically of oil, the President stated that although six of the principal oil producing states have signified their acceptance of an interstate compact subject to ratification of the Federal Government, which compact, if ratified by the Government, would give the states the right to set production quotas, it has no force or effect in other states. For this reason the President believes that further legislation is necessary to safeguard the interests of the states not entering the agreement.**

**The President stated that although the compact states wanted no further legislation, there were a good many people who did. Further legislation, the President stated, if passed by Congress, would be brought into play only in case the compact fails. In answer to the question as to what the result would be if one of the states should overproduce he stated that the power vested in the Federal Government would be directed only against the recalcitrant state and not against all the oil producing states.**

**The President would not indicate what type of legislation, if any, he had in mind for the regulation or control of the oil industry, but numerous attorneys connected with the industry are of the opinion that the recent decision of the Court specifically outlawed all attempts to control the production of oil either directly or indirectly.**

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**P. and C. Committee Meets**

**WASHINGTON, D. C., June 3.—At a meeting of the Planning and Coordination Committee Monday it was decided that the employes of the committee should be kept on duty until a meeting of the committee on June 14. This meeting, it is expected, will definitely deal with the situation, probably by the abolishment of the committee and the dismissal of the employes if no legislative action has been taken by then. This action, many believe, is the only thing to be done under the decision of the Supreme Court, but there is some support for the continuation of the committee, although it is generally conceded that no positive action can be taken by any members of the committee or by the personnel without the sanction of a law of some kind.**

**It was decided in view of the uncertainty now existing as to the legislative program of the administration and of Congress that no definite recommendation as to future plans for the industry was yet advisable.**

**The industry was urged to make every effort to retain the advantages which have been gained in the past two years, this being possible only by the co-operation of every unit in the industry.**

**Best information reaching headquarters here is that there is now little chiseling going on in the oil industry. There have been no recent complaints or reports to Washington showing that any oil companies have attempted to chisel, cut wages, advance hours, or in any other way interfere with orderly business.**

**The only possibility for an increase in hours is in the drilling branch, in which it has long been the contention of employes actually engaged in drilling that they should be allowed to work longer hours than the number specified in the code. The lengthening of the hours of labor of these employes would not result in any decrease in expense to the drilling contractors, but would result in the advance of wages to employes.**

**Question of Allocations**

**The only disadvantage to the oil industry, it is said, would be in the discontinuance by the Planning and Coordination Committee and the petroleum administration of allocations of gasoline production and crude oil production by districts, but it is believed this will be overcome by action by the President and Congress.**

**It is generally anticipated also that the President will indirectly ask that provision be made for voluntary agreements among trade and industry, as provided in Section 4(a) of the National Industrial Recovery Act. The 10 per cent of chiselers in all business, President Roosevelt's principal objection to voluntary codes of air competition, have not been so apparent in the oil industry during the several months' performance under the oil code in voluntary compliance.**

**The benefits which have been derived under the refinery control and production control provisions of the code should be perpetuated in the opinion of numerous members of the industry who have gathered here to attend meetings of the Planning and Coordination Committee. Whether this activity can be continued under the sanction of Section 4(a), in an enlarged form, is unknown, but it is anticipated if this section is re-enacted, or enlarged, that these activities can be performed. If this action is taken, it is generally agreed that the stabilization work which has been undertaken by C. E. Arnott can be continued.**

**If gasoline production allocation, on which is based crude oil production, is continued it will be almost mandatory that the stabilization of retail markets which has been started under the direction of Mr. Arnott will be continued. Some members of the staff of the Planning and Co-ordination Committee state that the position of the various stabilizing factors in the oil industry should be first, gasoline allocations; second, crude oil allocations; and third, the stabilization activity of C. E. Arnott as it applies to retail markets.**

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# Retirement of Christy Payne Announced at New Jersey Company Meeting

By C. O. WILLSON

**NEWARK, N. J., June 4.—Suspension of the NRA should not make any basic changes in the operations of the oil industry Walter C. Teagle, president of the Standard Oil Co. (New Jersey), told stockholders at the company's annual meeting here today. Mr. Teagle said it was not the intention of the company to increase hours of employment or reduce wages and salaries and expressed the hope that the industry generally would not take advantage of the ending of the NRA to resume practices which are conceded to be undesirable.**

**The company in its annual statement made it clear that it favors state rather than federal control for the oil industry. Regarding this the statement said in part:**

**"Since 1921, the failure of the industry to earn an adequate return upon its investment has been directly attributable to overproduction.**

**"Believing that under the constitution the remedy for this condition lies primarily with the states, we have consistently urged the enactment and rigid enforcement of state laws preventing wasteful producing practices, promoting economical operation and making possible the maximum ultimate recovery. Adequate measures of this character are now in effect in most of the important producing states, and these, with the Connally law, passed by the present Congress and prohibiting interstate movement of oil produced in violation of state law, should maintain a reasonable balance between production and consumptive demand.**

**"Furthermore, the states are now working out a compact for co-operative effort which we believe should be promptly approved by Congress. Coupled with this, a fact finding agency should be set up, by which the essential current statistics of production, stocks, exports, imports**

CHRISTY PAYNE

**and market demand can be accurately and impartially determined.**

**"Proposals continue to be made contemplating the more or less complete regimentation of the industry under federal control, the conversion of the industry to public utility status by congressional fiat, and the like. It is believed**

(Continued on Page 32)

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**A.P.I. DIRECTORS TO MEET**

**NEW YORK, June 4.—A special meeting of the board of directors of the American Petroleum Institute has been called for Wednesday, June 5, at New York to consider the situation arising from the Supreme Court decision on the N.R.A.**

**In his call for the meeting, President Axtell J. Byles said:**

**"It is assumed that no one will disturb the present status of employes with respect to wages and hours. It is further assumed that all operations will be conducted in conformity with sound and fair business practices."**

**The refinery situation will be considered at a meeting in Chicago June 6.**

# Refinery Construction Work Now in Progress to Require $17,000,000

By W. T. ZIEGENHAIN

Approximately $17,000,000 worth of new construction is now in progress among refineries of the United States and considerably more than this amount is on the drafting boards of refining and refinery equipment companies. The stability of gasoline prices over the past year and the resumption of favorable operating balance sheets has encouraged refiners to modernize their equipment and in some areas to increase capacities.

As shifts are made in the sources of crude oil there is a constant shifting of refining capacity and the finding and developing of the East Texas oil field certainly was no exception. Approximately 200,000 bbls. of new refining capacity was built in the East Texas area in the past four years and this came at a time when more than one-third of the total capacity of the country remained idle. Much of this new construction was of a temporary nature, however, and included the use of much salvaged materials. The operation followed the simplest forms of procedure and as long as local crude could be purchased at an unreasonably low figure it was possible to move the products at a correspondingly low price and this in turn withheld permanent refinery construction elsewhere.

### Conditions Changed

In the past year there has come a decided change in the East Texas refining situation, however, and a number of plants have been forced to close down for lack of crude. The stronger and better established units turned to cracking as a means of increasing the recovery of gasoline, and to improve the antiknock value of the product. The trend in East Texas among refiners is definitely toward fewer but larger units, equipped with cracking and vapor recovery facilities.

With East Texas working its way into the background, refinery and retail gasoline prices generally are able to support dollar crude and refinery operations are yielding a small margin and there is a willingness on the part of refiners to again consider making improvements in equipment and methods of operation.

### Forty Per Cent Obsolete

At least 40 per cent of the present refining capacity is obsolete when considered from the light of the improvements that are available to reduce operating costs but the operator cannot always justify installing new equipment on this basis alone. The old investment cannot be written off these days as fast as it becomes obsolete and in a majority of instances the refiner has had to just hit "the high spots."

Two major developments which have attracted the interests of refiners and for which large amounts of money are being spent include the installation of combination crude distillation and cracking units to replace the conventional dual still arrangement and the installation of solvent units for the separation of the paraffinic and asphaltic hydrocarbons and for dewaxing. The latter are restricted to those plants manufacturing lubricants so that the field is limited to about 80 refineries or less than one-fifth of the total number now operating. It has been estimated that approximately $5,000,000 will go into solvent refining plants during 1935. While the amount to be spent for solvent dewaxing plants is indeterminate, it will probably reach a figure between $1,000,000 and $2,000,000 for the year. Because refiners are replacing conventional methods with solvent units on such a broad scale and with large plants, approximately 40 per cent of the needs for lubricating oils may be filled by solvent refined oils within the next year.

### Future Work

It goes without questioning that as refiners see fit to replace their present crude distillation units and cracking equipment they will try to time the replacements to permit installing combination units. It is also likely that solvent refining will replace present practices as the old is worn out but there will also be modifications of the present practices of solvent refining that will permit a wide range of operations. The inclusion of solvent dewaxing along with solvent refining and use of propane as a combination selective solvent and dewaxing medium hold strong arguments in its favor. There remains to be solved the question of whether the solvent treatment of a long resid is preferred to fractional treatment, whether the easily dewaxed or the difficultly dewaxed oils are preferable as lubricants, or whether refining may be replaced to some degree by adding materials to the lubricating oils as made by conventional methods in the form of pourpoint suppressors, V.I. improvers, etc.

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# Company and Crew Proud of Drilling Record Made in World's Deepest Test

By L. E. BREDBERG

*Gulf Production Co.'s No. 103 McElroy, Sec. 197, Blk. F, western Upton County, Texas, deepest test in the world. Total depth 12,786 feet*

FORT WORTH, Tex., June 3.—The deepest test ever drilled, Gulf Production Co.'s No. 103 McElroy, situated in the McElroy Permian lime producing field in Crane and Upton Counties, Texas, the test falling in Section 197, Block F, Upton County, is bottomed at 12,786 feet while Schlumberger and other instrument tests are being made of the formations for special correlation work that will be used by the company in future drilling in the district, especially in drilling other Ordovician or deep tests. It is now drilling such a test about 20 miles to the west in Crane County and it is believed the information obtained in No. 103 McElroy will be of material aid.

The bottom of the hole in No. 103 McElroy is 2.422 miles into the earth, and in drilling to this depth several records have been set. It is 1,409 feet deeper than the next deepest test, General Petroleum Co.'s No. 1 Berry, in Kern County, California, and 1,556 feet deeper than the next deepest hole, Denver Producing & Refining Co.'s No. 1 A-Dah-Noe, in Caddo County, Oklahoma. The rotary drilling line used in No. 103 McElroy would extend 11.8 miles if laid out in a straight line.

### Proud of Crews

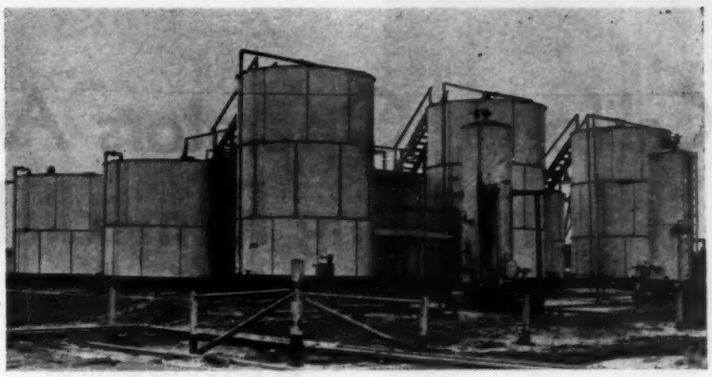
Gulf Production Co. officials are especially proud of the four drilling crews setting the worldwide records. All four drillers have been on the test nearly since it was spudded on March 21, 1933, and have carried down the hole with a deviation of only one degree at the bottom, another record. Some of the other men working on the test have been promoted and transferred to better jobs which required replacements to fill out the crews. B. G. Martin, the young geologist assigned to maintain a complete record and drilling log, also set up a proud record. He has compiled a log that is 128 inches long on a scale of 100 feet to the inch, which makes the original at least 20 feet long, a record log on a drilling test. This log contains not only the formations drilled, but shows a complete list of equipment used, the shutdowns, repairs and changes made in equipment; water, gas (fuel), drilling mud, chemicals and other materials used; fishing jobs, showing time taken out and what caused the jobs; pump troubles, liners, cut outs, deviation tests, at what depth they were taken and how many degrees off vertical, if any; weight of drilling mud and description, returns lost, if any, and amount of oil used on the equipment.

The safety record established by the drilling crews is one to be proud of also. Only one lost time accident was reported and that was not caused by any carelessness on the part of the crew or any faulty piece of equipment, but was prin-

(Continued on Page 20)

*Front row, left to right: J. G. Moon, Raymond Knox, H. H. Moore, driller, Albert Harper. Second row: E. D. Brockett, B. G. Martin, geologist; L. P. Hart, C. D. Aycock, driller, George McElveen, driller, and George Jr. Rear row: J. C. Neal, H. H. Holliman, T. E. Patrick, R. W. Knight, W. J. Walsh, drilling foreman, A. G. Dement, R. C. Randolph, driller, R. L. Knight, O. J. Bailey, Frank Hajek and V. F. Tilley*

# New Discharge Valve of High Pressure Type For Low Pressure Use



*Tank battery on Means lease of Mills Bennett Production Co. at Barbers Hill*

By NEIL WILLIAMS
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., June 3.—Curtailment of production under proration in many instances on the Gulf Coast has reduced the volume of fluid handled by separators to such a point that operators using old low pressure type separators with the conventional double seated valves have been having trouble maintaining sufficient fluid level in their separators to prevent the by-passing of free gas into the tanks.

This has been resulting in several things: First, there is a loss of the gas which is an important item, especially if the gas is needed for fuel and other lease requirements. Second, there is a coincident loss of pressure on the lease gas system. Third, the escape of free gas into storage tanks creates an agitation in the tanks which tends to increase vaporation losses, and also affects the gravity of the oil.

### High Pressure Separators

Such trouble is not experienced with the new type high pressure separators with their pilot operated positive control valves but for the most part operators are not inclined to replace equipment already in use, and it is not always advisable to use high pressure separators.

Faced with such a situation, W. R. Smith, pumper, and other field men of Mills Bennett Production Co. at Barbers Hill conceived the idea that a discharge valve operated similarly to those employed on the newer type high pressure separators could be made adaptable to the old low pressure equipment already in use on the various leases.

This company has been running several rigs. A gas system supplied by gas from all these leases provides fuel for the boilers. Sufficient gas always was produced for all requirements until oil production was reduced, but since then pumpers have been having almost constant trouble with the separators and valves in attempting to maintain sufficient fluid level to hold up the gas pressure, and the company, in addition, has had to buy gas outside.

It was some time before the cause of the trouble was determined, and pumpers put up with the grief of manually closing the valves when the pressure went off so the fluid level could build up.

In providing another type valve for these separators to overcome the problem, the field men were assisted by Nowery J. Smith Co. of Houston, and a single seated diaphragm valve with pilot operated control similar to those on the modern high pressure separators was worked out. As no great pressures were involved, the valve was constructed of cast iron instead of steel and was comparatively light in weight, which made it possible for the valve to be provided at a cost sufficiently low to justify its installation. It was provided with a uniform bracket and pilot valve adjustable to any type of float cage built in the past eight years.

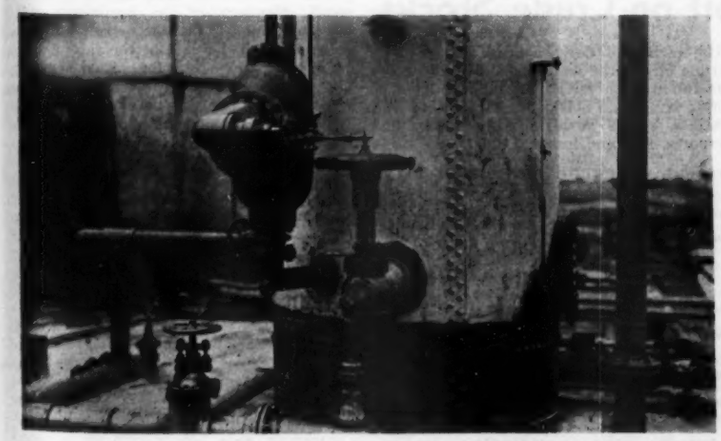
### By-Passing Eliminated

Installation of such a valve to replace the conventional double seated valve with which low pressure separators have always been equipped has proved so successful on the first separator all the company's separators have been changed over, and other companies are following. In the installation the problem apparently has been solved as all by-passing of free gas has been eliminated, and the company has not had to buy any gas outside.

Effective operation of the conventional double seated valves, seated downward, depends entirely on the maintenance of the fluid level in the separator above the top, or larger, of the seats. The fluid over and around the valve seats provides a seal against the free gas in the top of the separator. Opening and closing of such valves is controlled directly by the float. Under original production practices the incoming production usually was of sufficient volume the float could be set to maintain a virtual balance between the intake and the discharge with the fluid covering the valve seats.

However, with restricted production, the discharge from the separator usually is at a greater rate than the intake so dumping of the separator takes place only at intervals when the fluid level can be raised above the valve and discharge line. With these double seated valves it has been found when the fluid level drops below the seats, and the fluid seal is removed, the gas pressure coming into the valve between the two seats prevents the valve from closing, which permits the gas to escape through the valve and the discharge into the tanks. Consequently, no pressure can be built up, and the separator serves no purpose. The valve is held open rather than being forced shut by reason that one seat is larger and naturally the pressure exerted against it is greater. As the larger seat is at top and seats downward, the pressure exerted on the under side of the large seat forces the valve up and open.

On the other hand, the new type valve, which is similar to those on the more modern separators, is not operated directly by the float. Instead, the float opens and closes a pilot valve which, when opened by the lowering of the fluid level in the separator, causes a gas pressure to be exerted on the diaphragm valve, which forces the valve seat closed. This remains closed until the fluid level in the separator is raised to a point that the float closes the pilot valve.



*Installation of pilot valve operated, positive control discharge valve on old, low pressure separator made by Mills Bennett Production Co. on one of its leases at Barbers Hill, Gulf Coast. The installation replaced the conventional double seated valve which permitted the by-passing of free gas into the tanks*

# Texas to Sell Three Million Barrels of Confiscated Stored "Hot" Oil

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., June 4.—Texas is confiscating 1,000,000 more barrels of stored oil in the East Texas Field for sale at public auction. As soon as all the oil can be gauged by Railroad Commission men 2,000,000 more barrels are expected to be confiscated in the field and sold. A purchasing corporation may be formed to bid on this oil to hold the price near the present posted price of $1 per barrel to prevent interference with the present market. Capt. J. F. Lucey and E. B. Germany, both of Dallas, have proposed such an organization with hope that the majors will back them up.

District Judge C. A. Wheeler in Travis County District Court Saturday ordered 430,000 bbls. of oil stored in East Texas confiscated and sold by the state under the new confiscation law. The orders, based on suits of Attorney General William McCraw, recited three lots of oil, of 90,000 bbls., 40,000 bbls., and 300,000 bbls. were unlawful. The Ocean Petroleum Co., J. O. Presnall and J. C. Potter of Kilgore, were listed as interested parties. A state receiver was authorized to sell the oil at 40 cents a barrel.

On Friday 100 tank cars of confiscated hot oil, the first seized under the new law, were sold by Carl Casey, Waco attorney, as receiver for the State. The sale was made to Master Petroleum Co., Waco, for $8,540.80.

Answering criticisms of Chairman E. O. Thompson of the Railroad Commission, that petroleum confiscated by the State as illegal and sold at 40 cents per barrel under court order should have been offered on competitive bids, Attorney General William McCraw said the oil had deteriorated and was not worth full prices. He said 3,000,000 bbls. estimated to be the "hot" oil now in storage, will be sold by the State for about $1,000,000, and that he believes the sales will not disturb the oil market.

The Railroad Commission has announced the promotion of Gordon Griffin, former chief petroleum engineer, to the new post of chief of the production division, recently created by the legislature. V. E. Cottingham, former deputy oil and gas supervisor at San Angelo, succeeded Mr. Griffin as petroleum engineer.

### Injunction Suit

Roy I. Davis has filed petition in the Federal District Court at Tyler for an injunction restraining the Railroad Commission from interfering with shipment of 104,423 bbls. of crude which he says was legally produced during the latter part of June, July, August, September, October and November, 1934, but that the commission has refused to grant tenders on it. Federal District Judge Randolph Bryant on May 30 denied an injunction sought by the Tyler Pipe Line Co. to restrain the commission from interfering with movement of 160,000 bbls. of charging stock, holding the firm did not show it was an innocent purchaser, that due diligence was used, or that the oil was legal production.

The Railroad Commission had refused a tender on 200,000 bbls. of oil salvaged and to be salvaged from oil that escaped from pits at three Gladewater refineries about three weeks ago when heavy rains broke out the sides of the pits. The

(Continued on Page 32)

# California Operators Are Busy Formulating Remedial Measures

By L. P. STOCKMAN

LOS ANGELES, Calif., June 3.—The Oil Producers Agency of California, largest independent organization in the State and sponsor of the California proration act introduced in the legislature a few months ago designed to provide a means of forcing compulsory curtailment, has decided not to make any further attempt to secure passage of the bill at this session. The senate committee on oil industries, by a vote of 5 to 4, ordered it tabled.

The agency feels that the limited time left and the last minute jam in the legislature cannot be overcome. In announcing its decision, Rush Blodgett, executive vice president, in a caustic memorandum stated that "a small minority of operators seeking only personal advantage have resisted passage of this particular bill. Their opposition at the committee hearing and prior thereto made it impossible for members of the committee to visualize existing and future conditions in the oil industry and to realize the necessity of this legislation for the protection of natural resources of the State and of the oil industry. The Oil Producers Agency has done its part and responsibility for developments rests entirely upon the opposition. While uncertainty has been again intensified by minority action our group shall have to continue to strive for the maintenance of stabilized condition."

### Remedial Measures

California operators, faced with a serious situation from both production and marketing angles, are not losing any time in formulating remedial measures. The Central Committee of California Oil Producers, official curtailment committee under the petroleum code, met after the Supreme Court decision was rendered and voted to empower Umpire J. R. Pemberton, Ralph B. Lloyd and a subcommittee to allocate the daily allowable of 512,700 bbls. during June to the various fields of the state. Some operators will not conform with it as the temporary program is purely voluntary, all restraints having been removed. Temporary restraining orders involving Wilshire Oil Co., Mohawk Oil Co. and Monarch Refining Co. were dissolved late in the week.

The Pacific Coast Petroleum Agency, formulated under the petroleum code, ceased to function May 31. K. R. Kingsbury, president of the agency, wired all interested that "In view of the decision of the U. S. Supreme Court it becomes necessary to terminate the agreement between the Pacific Coast Petroleum Agency and the refiners. The Pacific Coast Petroleum Agency will continue in existence only for the purpose of liquidation."

The Pacific Coast Petroleum agency, it was said, could not continue to operate under the present setup without violating the Sherman antitrust laws or keep within provisions of the supplemental agreement filed with the Federal Court at San Francisco at the time the original agreement was signed.

### Plea for Co-operation

Ralph B. Lloyd has joined Umpire Pemberton in stating that "unless all producers are willing voluntarily to co-operate in sharing the existing market for crude oil, competitive conditions will force those who customarily purchase a large part of their refinery requirements to draw on their needs from their own wells. The result will be that hundreds of producers will suffer from a demoralized price for their product or a complete lack of outlet for their production. On behalf of all producers and refiners within the state we urgently beseech that all units and individuals demonstrate once and for all that the oil business in California can be stabilized in every respect by immediate co-operative effort, for unless this is accomplished great financial losses will be the lot of the petroleum industry and that effort will be reflected on labor and on the public in general.

The committee's statement also states that "all excess production incurred during the administration under the federal code has been cancelled and producers will, therefore, start as of June 1, 1935, with a clean slate. The quota set for June is the highest amount allocated within the state in five years. The present price of crude oil is regarded as acceptable. Producers have it in their own hands whether the present price of crude oil shall remain as it is or whether drastic cuts will be made. The oil producer who insists on selling his oil at a price less than the quoted market price plays directly into the hands of the bearish element within the industry. Such tactics have an immediate and positive effect on the situation as a whole."

### Voluntary Curtailment

The California industry must rely on co-operative action if prices are to be maintained on a profitable basis. The committee that stepped into the breach following the Supreme Court decision calls attention to the fact that "self-government is with us again. The only possible way to prevent a monopoly by the large refining companies is for all producers to curtail their production so as to share equitably in the existing market. Without curtailment the large purchasing companies can use their own production to fill refinery needs leaving all other producers to find their own salvation. The sensible way for producers who do not own refineries is to curtail their production, thereby obtaining equivalent output to that of refinery companies and by mutual co-operation prevent monopolies."

The Central Committee of California Oil Producers took the necessary steps early in the week to permit and facilitate co-operative effort. This committee represents by election all producers in the state. There are a few integrated companies that have steadfastly refused to become parties to any agreement but, considering the state as a whole, the committee is fairly representative. This committee set a quota of 512,700 bbls. per day for the month of June, distributed equitably to all fields to adequately meet all requirements of producers and refiners. The quota is being broken down by Umpire Pemberton for individual fields to take care of small wells as well as large ones.

### Legislation

Voiding of the oil code was of special importance to California because this state does not have any state legislation to take the place of the code and operators cannot be compelled to adhere to any program. Effort was being made to secure passage of legislation at Sacramento which seemed the only means of stabilizing production and marketing conditions. The California gas conservation law is still on the books but it covers only waste of gas and is not as wide in scope as desired. The legislation which offered possibilities of stabilizing conditions was the California oil proration act introduced by Senator Metzger May 22, a few days before the national code was voided and was to be a supplemental measure to the interstate compact.

### Proposed Regulation

The California oil proration act, Senate Bill No. 1121, if enacted, would be in effect for four years and continue concurrently with the interstate compact. It provides for creation of a committee of California oil producers, a petroleum commission, and appointment of a state oil umpire. It will be subjected to much criticism and its fate cannot be foreseen. It will also be subjected to the usual court battles if enacted and cannot be of any great importance for several months. It took several years to get a final decision on the California gas conservation law and when it was finally decided valid it was of no use as gas depletion had eliminated gas waste.

Under the act the committee of California oil producers would be elected by producers. Each operator having a daily production of 20,000 bbls. would be entitled to one vote and each field producing 20,000 bbls. per day to one vote. Fields producing less than 20,000 bbls. per day will be grouped and entitled to one vote. Members must be residents of California and have had at least three years' experience in the oil industry. Buena Vista, Kettleman North Dome, Midway-Sunset, Ventura Avenue, Dominguez, Huntington Beach, Long Beach and Santa Fe Springs are recognized as having produced 20,000 bbls. per day and are entitled to one vote each. The remaining fields are separated into groups.

For voting purposes, Group 1 would include East and West Coalinga; Group 2, North Belridge, South Belridge, Lost Hills, McKittrick, Devil's Den, Kettleman Middle Dome, Elk Hills and Wheeler Ridge; Group 3, Coffee Canyon, Edison, Fruitvale, Kern Front, Kern River, Poso Creek, and Round Mountain; Group 4, Mountain View and Mount Poso; Group 5, Capitan, Elwood, Rincon, San Miguelito, Santa Barbara, Santa Maria, Summerland, Ventura-Newhall, Edna, Half Moon Bay, Los Gatos and Sargent; Group 6, Playa Del Rey, Torrance, Wilmington and Inglewood; Group 7, Potrero, Lawndale, Los Angeles, Rosecrans, Seal Beach, Alamitos Heights, Montebello, Richfield; Group 8, Brea-Olinda, East Coyote, West Coyote, Whittier, Kraemer and Puente.

### Petroleum Commission

The bill proposes to create a petroleum commission of four members. Three are to be appointed by the governor from a list of nominees selected by the committee of California oil producers elected by the operators. The fourth member of the petroleum commission will be the director of natural resources, ex officio. Petroleum commissioners will serve for four years while the committee of California oil producers will serve for two years. Members of both are subject to recall. Members of the committee will serve without pay but the petroleum commissioners will be paid at the rate of $25 per day and expenses for actual service. The director of natural resources will not be entitled to this stipend.

The petroleum commission is to be given power to adopt rules and regulations, to require operators, transporters, refiners and marketers to file with the commission sworn statements of production of oil, transporting, refining and marketing of oil and such statements as necessary to determine the quantity of oil produced by any well or wells, the amount of oil in storage, the rate of additions to or withdrawals from such storage, together with statements of sales and shipments of oil within or from the state.

### Establishes Demand

The petroleum commission, of which the director of natural resources is a member ex officio, is to be charged with determining from month to month and at least once every two months the amount of oil reasonably necessary to be produced by the then existing wells to

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# Administrator's Report on Crude Stocks

WASHINGTON, D. C., June 3.—Stocks of domestic and foreign crude petroleum at the close of the week ended May 25 totaled 323,379,000 bbls. according to data compiled by the Bureau of Mines, Department of the Interior, for Petroleum Administrator Harold L. Ickes. Compared with data for the previous week, this total represents a decline of 630,000 bbls., comprising decreases of 488,000 and 142,000 bbls. in stocks of domestic and foreign crude, respectively.

Current reports of the industry for the week ended May 25 indicate that crude oil production declined but that crude runs to stills increased materially. Daily average crude oil production for the week ended May 25 was approximately 2,635,000 bbls., or 50,000 bbls. below the average of the previous week. Daily average crude runs to stills were reported by the American Petroleum Institute as 2,685,000 bbls., an increase of 155,000 bbls. over the average of the previous week. Imports of crude declined from 103,000 bbls. daily to an average of 74,000 bbls.

The estimated daily average balance of crude oil for the week ended May 25 was as follows (barrels): Production, 2,635,000; imports, 74,000; decrease in stocks, 90,000, equals runs to stills, 2,685,000, exports, fuel and losses, 114,000.

**STOCKS OF CRUDE PETROLEUM, MAY 18 AND 25, 1935**

(Barrels of 42 gallons)

| Grade of crude oil— | May 18 | May 25 |
|---|---|---|
| Pennsylvania Grade | 4,636,000 | 4,657,000 |
| Other Appalachian | 1,001,000 | 1,066,000 |
| Lima-N.E. Indiana-Michigan | 1,297,000 | 1,332,000 |
| Illinois-S.W. Indiana | 11,693,000 | 11,636,000 |
| N. Louisiana and Arkansas | 10,324,000 | 10,216,000 |
| West Texas and S.E. New Mexico | 31,168,000 | 31,115,000 |
| East Texas | 30,861,000 | 30,892,000 |
| Other Mid-Continent | 147,547,000 | 147,858,000 |
| Gulf Coast | 22,469,000 | 22,473,000 |
| Rocky Mountain | 27,556,000 | 27,535,000 |
| California | 31,399,000 | 30,663,000 |
| Domestic crude | 319,961,000 | 319,473,000 |
| Foreign crude | 4,048,000 | 3,906,000 |
| Total* | 324,009,000 | 323,379,000 |

*Represents approximately 98 per cent of total stocks in the United States, exclusive of producers' stocks.

# Blowout Prevention and Control

By W. V. VIETTI and A. G. LEVY
The Texas Co., Houston, Tex.*

W. V. VIETTI

Blowouts, for the purpose of this paper, are classified as either primary or secondary. A primary blowout refers to a flow of mud in combination with water, oil, or gas from a rotary drilling well. A secondary blowout refers to a wild well, or, in other words, is a primary blowout which is out of control.

Primary blowouts are accidents, the causes of which are often obscure. However, the principal known causes are as follows:

**1. Use of Improper Drilling Mud**

(a) Too light or too heavy;
(b) Too viscous or too thin;
(c) Too high gel rate;
(d) Too high gel strength or too low;
(e) Incorrect measurement of mud weight;
(f) Entrained gas and/or air;
(g) Lack of uniform characteristics;
(h) Inadequate de-aeration or screening.

**2. Careless Practices**

(a) Running fill-up pump continuously while pulling pipe from hole;
(b) Pulling drill pipe off bottom too rapidly.
(c) Using too large a diameter drill collar, reamer, or pipe;
(d) Balling-up the bit or drill collar by crowding in sticky formations;
(e) Drilling too rapidly into gas-bearing zones, entraining the gas faster than the mud can safely carry it to the surface;
(f) Pulling pipe out of the hole before the mud is in proper condition;
(g) Continuing to drill or circulate mud in the hole during a heavy rain;
(h) Failure to have an available reserve supply of mud for change when necessary;
(i) Failure to have adequate pumping equipment backed-up by boilers of ample capacity and in good repair;
(j) Lack of general vigilance on the part of drillers and foremen for the unmistakable signs of gas.

The prevention of primary blowouts is not so simple as an enumeration of the known probable causes, which, however, do suggest certain procedures, a discussion of which follows:

**Principles Known**

The fundamental principles of blowout prevention have been presented to the industry in several excellent papers. This paper contains little that is new, but attempts to summarize some of the more important advances in blowout prevention and control in the Gulf Coast.

A well filled with a mud column of sufficient density cannot blow out. The required density for normal conditions has been thoroughly studied and summarized by J. W. Graybeal[1] and E. P. Hubbard.[2] These authors agree that a mud column weighing 9.5 pounds per gallon is sufficient to overbalance the normal pressures encountered in the Gulf Coast. Formation pressures seldom exceed a maximum equal to the pressure which would be imposed by a column of saline water in the well, which pressure is about 10 per cent in excess of that which would be exerted by a column of fresh water. Blowouts are frequently attributed to abnormally high pressures, which, as a general rule, have been found later to be normal. Failure to observe the signs of imminent trouble and failure to take proper preventative measures are generally the true explanations.

The maintenance of a mud column of the desired height, of uniform weight, viscosity, and gel characteristics is the real problem. Mud of adequate density (9.5 to 10.5 pounds per gallon) is neither hard to prepare nor expensive to maintain. Heavy muds are difficult to handle, expensive to prepare and maintain, and are generally unsatisfactory. They have undesirable characteristics of viscosity and gelation which invite blowouts. An operator will usually experience more blowouts with 14-pound than with 10-pound mud.

The viscosity of a mud in drilling practice is usually expressed in terms of the time of efflux of a given volume through a funnel or more-or-less standard specifications. As a consequence, it is measure of per cent of solids, per cent of colloids, and speed of gelation. The funnel viscosimeter too often measures a partially gelled mud. Viscosity, as usually measured, is therefore not an accurate indication of the characteristics of the mud. The actual viscosity of a mud is a factor in the prevention of primary blowouts, in so far as it is related to the loss of circulation, which does explain some blowouts. Loss of circulation may often be prevented by a mud of high viscosity, which usually indicates high colloidity. A colloidal mud builds a thin mud cake on the wall of the hole, which, as pointed out by E. P. Hubbard, is not likely to be seriously disturbed by the drill pipe. This thin cake is also more nearly impervious than the thick mud cake built up by muds low in colloidal material. The addition of colloidal material or lime to mud is the customary method of correcting loss of circulation. The lime flocculates the mud, the results of which are a high viscosity together with a high rate and high strength of gelation. This is a practical procedure for the drilling of surface sands and gravels, which should be cased off soon after drilling, in order that this type of mud may be discarded. This type of mud is undesirable for drilling sticky shales, gumbos, gas and/or oil sands, or porous limestones. E. P. Hubbard suggests the use of sodium silicate together with hydrochloric acid to seal porous formations which are taking mud. This method does not seem to be in general use as Hubbard's paper represents the only experimentation known to the writers. Cement, and particularly the cement-bentonite mixes, are generally used in spite of the loss of time involved in setting and the frequent necessity for repetition.

**Gel Properties**

The rate of gel formation and the final gel strength are among the more important characteristics of a drilling mud, after an adequate density has been obtained. The importance of gelatin has been recognized by most Gulf Coast operators. Both J. W. Graybeal and E. P. Hubbard discuss the problem in their papers. George E. Cannon[3] demonstrated that the gel strength of a mud was directly related to the pressure drop in a hole caused by withdrawing drill pipe. Cannon measured pressure drops of 375 pounds per square inch at the bottom of drill pipe when it was raised off bottom. Cannon's work analyzed the mechanics and proves the importance of the swabbing effect of pulling drill pipe out of a hole. He concludes that:

(1) Pressure drop varies as the gel strength; (2) pressure drop varies inversely as the area of the annular space between the drill pipe and the casing or the wall of the uncased hole; (3) pressure drop varies with the length of the drill pipe; (4) viscosity has very little effect on the pressure drop as compared with the gel strength; (5) mud weight has no effect on pressure drop; (6) drill collars, core barrels, or balled-up bits have, as a general rule, only a minor effect on pressure drop.

Pressure drop caused by the withdrawal of drill pipe is probably the immediate cause of most blowouts. A drop of 300 pounds per square inch is equal to the removal of 800 feet of mud weighing 9.5 pounds per gallon. The writers have witnessed bad gas cutting in wells where the weight of the mud exerted a calculated pressure of 700 pounds per square inch in excess of formation pressure. It is probable that Cannon's measured pressure drops are lower than actual, due to the distance between the point of pressure drop and the pressure gauge used in the tests. The gelled mud between the two points probably dampened the transmittal of pressure drop.

Drops in pressure, even though momentary, permit the entrance of gas into the well. The mud becomes gas-cut. Several repetitions of swabbing, without replacement of the gas-cut mud, will so lighten the entire mud column that a primary blowout will follow. The effect of gas-cutting increases enormously as the gas-cut fluid approaches the surface where the decreased hydrostatic pressure permits rapid expansion of the gas. The final effect may be a sudden flow of frothy gas-cut mud from the well and a primary blowout.

Samples of mud for testing are usually taken at the discharge from the well, where the mud carries a percentage of large solids, such as shale, sand, and rock cuttings. These solids give the mud an artificial weight that is deceptive. These samples should be taken at the suction of the pump and screened to remove large particles.

**Drilling Heterostegina Limestone**

Viscous and gelled muds will reduce loss of circulation as a general rule, but they will also suspend large percentages of solids and increase in weight rapidly. The increase in weight will in turn cause the loss of more mud. The writers recently observed the operation of this cycle in drilling through the porous Heterostegina limestone at a depth of 5,400 feet on a coastal salt dome. The viscosity of the mud had been increased to a very high value, practically beyond the limits of measurement through a funnel viscosimeter. The loss of mud was arrested temporarily. The weight of the mud rapidly increased upon drilling from 10 to 11.5 pounds per gallon due to suspended solids, and loss of circulation again occurred. Proceeding on the assumption that the loss of mud probably increased as some power of the difference between the formation pressure and the pressure exerted by the mud column, and decreased as only a linear function of the viscosity, the mud was thinned with fresh water to a weight of 9.5 to 9.6 pounds per gallon. The loss of mud stopped in spite of its thin appearance, which was scarcely more than that of dirty water, with a funnel viscosity of 23 seconds for 500 cc. flow. The well was completed as a producer at 5,930 feet with little further loss of this light non-viscous mud.

Entrained gas and/or air should be kept within low limits, or difficulty may be expected. A mud picks up some gas by natural displacement and exchange as a gas-bearing sand is drilled. Air is picked up by turbulence and agitation at the screen, in the ditch, or in the pit when the mud is "gunned" (agitation of mud in the pit or ditch by high-velocity mud jets), in spite of which "gunning" is necessary. This gas and/or air will not escape from a high gel-rate mud. A slow gel-rate mud, regardless of its ultimate gel strength, will release most of its gas or air and maintain its weight. The rate of gel, and not ultimate gel strength, may be the controlling factor in swabbing, because of the time element. A fast gelling mud is very dangerous. A slow gelling mud of sufficient colloidity and viscosity to suspend and remove cuttings is to be desired in the prevention of primary blowouts.

A mud must be uniform in character. Too rapid treatment, whether thickening or thinning, weighting or lightening, are to be assidiously avoided, if primary blowouts are to be prevented.

The weight of drilling mud may be controlled by one or more of several methods:

(1) Add water if too heavy; (2) add commercial clays or heavy weighting compounds if too light; (3) increase viscosity by use of colloidal material or chemical treatment, which will permit the mud to suspend more solids and increase in weight if too light.

The viscosity of a mud may be controlled by one or more methods:

(1) Chemical treatments for increase or decrease of viscosity; (2) colloidal materials may be used to build up viscosity if too low; (3) cement-cut mud is readily treated back to normal viscosity by use of a mixture of di-sodium phosphate and crude tannic acid in water.

The gel rate and gel strength of a mud may be controlled as follows:

(1) Increased by the addition of lime; (2) increased by the addition of caustic soda, sodium aluminate, or other alkaline and/or soluble metal salts; (3) decreased by treatment with sodium-tannate (caustic soda and crude tannic acid mixed with water), sodium gellate, etc.; (4) decreased by treatment with phosphate or other agents which will precipitate calcium. Calcium and/or magnesium are flocculating agents and are derived from drilling shales which undergo base exchange. Freshly set cement contains considerable amounts of soluble calcium hydrate. The cement-cut mud is treated as formely stated by di-sodium phosphate mixed with a protective colloid, such as crude tannic acid; (5) increased by the addition of colloids; (6) decreased in the presence of an excess of colloids only by

*Before Southwestern District, A.P.I., San Antonio, Tex.

the addition of water and then rebuilding weight by the addition of clay or heavy weighting compounds; (7) fixed so as to resist any known treatment by the use of an improper type of clay or mud-making material.

**Application of Preventive Measures**

Given a thorough knowledge of muds, or what is then known about them, then the important step in the prevention of primary blowouts becomes a problem of application and careful practice.

Most drillers today are acquainted with general mud treatments and methods of control and a field engineer is generally available for the development of special treatments. The driller must be alert and act quickly at the beginning of the primary blowouts. His intelligence, alertness, and decisiveness are the controlling features when a blowout is threatened.

When pipe is being pulled from the hole, the fill-up should be run periodically (every three to five stands) and then shut down. The driller should be trained to observe personally the conditions of the hole before pulling more pipe. A helper should observe the top of the casing occasionally to assure the driller that there is no evidence of swabbing while the pipe is being pulled. The pipe should always be lifted from bottom slowly, whether the pipe is to be pulled, a connection made, or merely lifted for reaming.

Sands should be drilled slowly and carefully to avoid too rapid an accumulation of gas in the mud. Connections (pipe added) should never be made in gas-bearing sands until a complete mud cycle has been accomplished.

Heavy rains will soon thin and lighten any mud to the danger point. Pumps should be shut down and pipe pulled up into the casing or out of the hole during heavy rains.

Failure to have an adequate reserve mud supply or supply of commercial material is inexcusable in areas where mud losses or gas may be reasonably expected.

The ability to circulate an ample volume of mud in the hole is important. The quicker the gas-cut mud can be circulated out of the hole and replaced by clean, fresh mud, the better will be the chance of preventing a primary blowout. This presupposes not only an adequate supply of fresh mud, but also ample steam pressure and volume together with pumps of sufficient capacity and pressure to effect a mud cycle in the hole in a minimum of time. Too viscous a mud will handicap the pumping equipment, as will also a drill pipe of too small an internal diameter. A reasonable balance between the average cross-sectional area of the drill pipe and the annular space between the drill pipe and the wall of the hole is also desirable. High velocities due to a small area between the drill pipe and the open hole are not desirable. This problem of maintaining a good relationship of areas is of considerable importance in deep holes of 7 inches or smaller diameter. The use of internal flush and external upset integral joint pipe seems to offer a partial solution of the problem.

When cores have been cut or questionable sands drilled, a complete cycle of mud fluid should be effected before pulling pipe from the hole. Fill up hole carefully and slowly in between withdrawal of stands of pipe to allow the escape of air, and do so at frequent intervals. Observe the behavior of the mud carefully and do not hesitate to pump mud through the Kelly or emergency circulating swivel occasionally rather than take costly chances.

**Secondary Blowouts**

Secondary blowouts are wild wells which were only primary blowouts a few minutes before. In spite of our knowledge, apparently careful practices, vigilance and supervision, secondary blowouts will occur. Every reasonable precaution must be taken to prevent primary blowouts, but when they do occur, the operator should be prepared to reduce them with all available methods and equipment at his disposal. Wild wells occur both in the absence and presence of blowout preventers, which in reality should be called arresters or controls.

The blowout preventers obtainable today are of three general types:

1. The slip or Hosmer or modified Hosmer type, either manually or hydraulically operated: these are reasonably effective, provided the primary blowout has not progressed too far and provided the equipment has been maintained in first-class working condition;

2. The ram types of control, two of which are in general use: both of these types have real merit, provided again that the primary blowout has not progressed too far and provided the equipment has been maintained in first-class working condition;

3. The stuffing box and the pressure operated packer types: these are designed primarily for pressure drilling for use with external flush-joint drill pipe.

Many secondary blowouts have occurred in spite of the presence of a slip type or a ram type blowout preventer, or even a combination of these two. Some common failures in actual operation or in practice have been:

1. Flow was too far advanced when an attempt was made to operate the control equipment;
2. Flow was strong enough to cut out or force out slip or ram packing before control equipment could be operated;
3. Force of flow was sufficiently great to bend arms of automatic slip back and jam equipment;
4. Arrester or arresters worked properly and satisfactorily but valves on mud lines were cut out while being closed against the flow;
5. Ram type of arrester failed to operate because pipe was hanging to one side of the hole;
6. The ram or slip packing had been worn by frequent tests and not renewed. These tests should be made, but it must be borne in mind that rubbers must be replaced from time to time;
7. Inadequate steam pressure or volume;
8. Low pressure or faulty high pressure fittings below the blowout controls;
9. Low pressure or faulty high pressure fittings on the mud lines;
10. Failure to have a choke nipple of adequately small bore on one mud line so that flow from the well is restricted sufficiently below the capacity of the pumping equipment;
11. Fear, lack of co-ordination or confusion on the part of the driller and his crew;
12. Failure to bleed-off water from the steam lines leading to steam-operated equipment, whether slip or ram type;
13. Work of crew disorganized by force of flow and perhaps flying equipment.

**Prevention Rules**

It is the writers' opinion that it is possible to set down certain rules which are more or less fundamental in the control of primary blowouts and the prevention of secondary blowouts. These rules follow:

1. Equip casing with a heavy high pressure bradenhead that can be packed under pressure;
2. Place a high pressure master valve directly upon the casinghead;
3. Place a ram type blowout arrester directly upon the master valve;
4. Place a steam-operated Hosmer or slip type blowout arrester directly upon the ram type blowout arrester;
5. Mud flow lines should lead out from the ram type arrester which is placed between the master valve and the slip type arrester;
6. Build mud lines only out of high pressure pipe and fittings;
7. Equip one 7-inch mud line for open flow to mud screens with two suitable high pressure valves or plug cocks and a by-pass for the choke nipple;
8. Equip one 4½-inch mud line with two high pressure valves or plug cocks and a positive choke nipple;
9. If a primary blowout starts when the pipe is out of the hole, close the master valve; remove all fittings above the master valve, and arrange for equipment to lubricate the well with fresh mud until the well is dead;
10. The Kelly or emergency swivel should be put on the drill pipe and the pumps started as the first operation when a blowout threatens or starts. Succeeding operations depend on the conditions at the time of flow and the type of preventer equipment.

If the drill pipe is hanging from the elevators and/or if the flow is minor in extent, the second step is to close the slip type blowout preventer; third, close

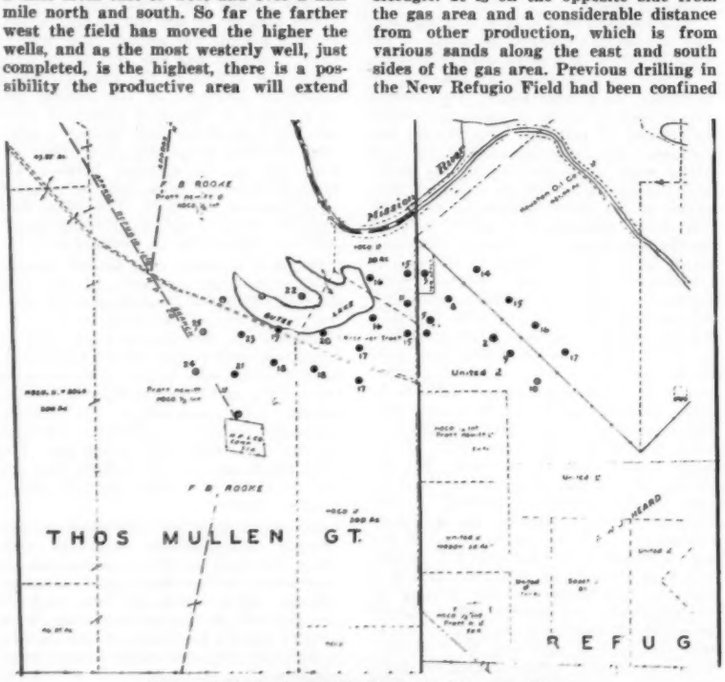
(Continued on Page 18)

# New Refugio Completes 22 Producers With No Dry Holes or Gas Wells

By NEIL WILLIAMS

HOUSTON, Tex., June 3.—A little over a year old, the New Refugio Field, on the west side of the original shallow sand, gas area of the old Refugio Field, has a record of 22 consecutive oil producers completed with no dry holes nor gas wells. So quietly has the development been carried on outside operators have given but little recognition to it, yet in a year a field comparable in area and potentialities to other coastal fields of considerably more prominence has been proved.

With the productive limits still undefined, the field already extends more than a mile from east to west and over a half mile north and south. So far the farther west the field has moved the higher the wells, and as the most westerly well, just completed, is the highest, there is a possibility the productive area will extend at least a comparable distance farther west.




*Map of Refugio Field, Refugio County, Texas*

The operating companies, Houston Oil Co. and United Production Corp., have carried on a consistent and orderly drilling program on their respective properties. As the leases are in large tracts there has been little occasion for competitive offsetting or hurried drilling. A uniform 10-acre spacing of wells has been followed with Houston Oil Co. running two rigs steadily and United Production Corp. one.

Apparently the major part of the field is held by Houston Oil Co., which owns all the acreage to the west, as well as to the east. United Production Corp.'s lease, on which there are six of the 22 wells, is wedged in between two Houston Oil Co. tracts.

Production is from a Frio sand around 4,900 feet, which has extended uniformly over the entire area to date. The amount of sand is not known as the operators have been content to take in only from 8 to 10 feet. The sand itself is in the upper part of the Frio.

Although producing from only 8 to 10 feet of sand, the wells flow initially at the rate of 600 bbls. daily through a quarter-inch choke with pressures of 1,600 pounds on the tubing and 1,900 pounds on the casing. This is a greater potential than wells in the Conroe Field for the same choke. Daily production of the wells, however, is being restricted to approximately 50 bbls. obtained through chokes as small as one-sixteenth. Under the most recent Railroad Commission proration schedule, the field is allowed a total of 1,000 bbls. daily. The oil is 31-32 degrees.

The discovery well, Houston Oil Co.'s No. 11 Rooke, was brought in May 27, 1934. Apparently the field has no connection with any other production at Refugio. It is on the opposite side from the gas area and a considerable distance from other production, which is from various sands along the east and south sides of the gas area. Previous drilling in the New Refugio Field had been confined to shallow sands producing strictly dry gas.

The orderly and gradual drilling of this 4,900-foot sand in the new pool is in rank contrast to the development of the rest of the Refugio Field, opening of which occasioned an intensive play during the latter part of 1928, 1929 and 1930. Taking in the townsite of Refugio, in which there were no restrictions as to drilling and spacing, that play resulted in close offsetting, and the various productive sands were hurriedly and overly drilled. This excessive drilling resulted in a rapid depletion of the reserves, and now the three main horizons developed at that time, those at 3,700 feet, 5,400 feet and 6,400 feet, have been nearly exhausted and operators have been directing their attention to reclaiming of various sands which may have been passed.

Under present drilling and production practices, the New Refugio Field is expected to have a long flowing life with a high recovery. With its uniformity of sands and production conditions, favorable pressures and potential, it lends itself readily to co-operative control, and is regarded by its owners as Refugio's most important contribution to Gulf Coast reserves although it has attracted the least attention.

# Service Characteristics of Motor Oils as Related to Chemical Composition

By DAVID R. MERRILL, C. C. MOORE, Jr., and ULRIC B. BRAY
Union Oil Company of California*

In discussing the characteristics of lubricating oils refined by the use of selective solvents, the question is sometimes raised as to whether such solvents may not remove certain useful components, in consequence of which the solvent-process oil may be deficient in lubricating value or, as commonly expressed, in oiliness. The purpose of the present paper is to present data on the service characteristics of some commercial lubricating oils and of lubricating-oil fractions which may be taken as representing typical classes of components. From these data, the conclusion is drawn that the removal of the less paraffinic fractions by the use of selective solvents results in an improvement in the lubricating value of the oil, as well as in other characteristics. From such information on the characteristics of typical components, it is also possible to arrive at a general estimate of the service characteristics of a lubricating oil when its composition, as shown by solvent-fractionation methods[1] is known.

Of the various functions of a lubricant, that of extending the useful life of the machine by reducing wear or preventing failure of parts in moving contact is unquestionably one of the most important. Although the higher operating temperatures in modern high-speed automobile engines have focused attention recently on problems of bearing lubrication and bearing composition, it is common experience that the repair costs on automobile engines are principally for overcoming the effects of wear, rather than the effects of mechanical failure.

Of the many tests which have been proposed for the examination of lubricating oils, by far the majority give results which are of value in characterizing the oil, but are only indirectly related to its lubricating value. The mechanical tests of lubricating oils for the most part fall into two classes; first, bearing tests such as the Navy work-factor test, in which the oil is subjected to moderately severe conditions of temperature and loading, and the changes occurring in the oil are subsequently determined by laboratory tests; and, second, bearing tests such as the Timken and Almen tests, in which the oil is subjected to increasingly severe load conditions until mechanical failure occurs, and the load at failure taken as an index of the quality of the oil. Tests of the first type, and laboratory tests in which the oil is subjected to the action of air or oxygen at a high temperature, give valuable indications of the changes which may occur in an oil in service, but give results related only indirectly to the wear-preventing characteristics of a lubricant. Tests of the second type give indications as to the probability of mechanical failure from scoring or seizing occurring under extreme-pressure conditions, but give little or no information on the wear to be expected at the lower bearing pressures which exist in automobile engines under normal service conditions.

The actual determination of wear in an automobile engine, either by micrometer measurement or by weighing the piston rings and pistons before and after a run, is laborious and time-consuming, since runs of several thousand miles are required to obtain a readily measurable amount of wear. Furthermore, if the tests are made on different engines of the same make, there is always considerable uncertainty as to the extent of their similarity; or if successive long runs on a single engine are made, the average age of the engine, expressed in miles run, is so different for the different runs as to raise a question as to the validity of the comparison. These difficulties in determining engine wear are largely overcome by basing the determination upon the increase in iron content of the lubricating oil in the course of runs of moderate length, as suggested by Langdon.[2] The same general method has been employed at the Pennsylvania State College,[3] and in the Royal Dutch Shell laboratories[4] for investigating cylinder wear in diesel engines. In the present work the increase in the iron content of the used oil has been employed exclusively as an index of the amount of engine wear; and the general uniformity of results in successive tests, together with a comparison of the results with measured wear under typical conditions, has been such as to justify considerable confidence in the validity of the method.

### Determining Wear

In using the increase in iron content of the lubricating oil as an index of the wear occurring in an engine, it has been found necessary to follow a carefully-defined procedure in order to obtain dependable results. If the engine is new, a breaking-in period equivalent to about 5,000 miles of normal operation is required before consistent wear values can be obtained. In any case, the lubricating oil previously used, together with its content of iron, must be thoroughly flushed out before the test run is made. To accomplish this, the engine was first operated under standard conditions of temperature and load for a one-hour period on a portion of the test oil. This oil was drained out, and the engine operated for a three-hour period with a second portion of the test oil, after which the oil was again thoroughly drained out. The engine was then re-filled with the test oil and operated for a definite period, usually equivalent to 1,000 or 1,500 miles, under carefully-controlled conditions of water and oil temperature, load, and speed. The first oil sample was taken at the end of 50 miles, a second sample at the middle of the test period, and the final sample at the end of the test period. In normal practice the original and final samples were used in the calculation of wear, and the intermediate sample was used only as a check. In taking these samples, extreme care was used to assure the samples being representative. All samples were taken from the circulating-oil line while the engine was in operation. Triplicate samples of approximately 10 g. each were taken directly in tared-porcelain crucibles, and the samples burned without transferring. The iron content was then determined by the thiocyanate colorimetric method. To express the results on a uniform basis, a value referred to as the wear index, representing the amount of wear in milli-

*Author's title, "Service Characteristics of Motor Oils as Related to Composition." Presented at mid-year meeting, A.P.I., Tulsa.

**TABLE 1.—INSPECTION DATA ON ORIGINAL OILS**

| Lubricant— Test Series: | A.P.I. gravity at 60°F. | Vis., S. U. 100°F. | Vis., S. U. 130°F. | Vis., S. U. 210°F. | V.I. | Viscosity-gravity constant[a] | Flash (C.O.C., °F.) | Fire (C.O.C., °F.) | Pour-point °F. | Conradson carbon % | Neutralization No. (ASTM) | Sulphur % by wt. | Indiana oxidation test: Time for 10 Mg. sludge (hrs.) | Indiana oxidation test: Time for 100 Mg. sludge (hrs.) | Indiana oxidation test: Viscosity increase %[b] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil E-1 ....First dynamometer ... | 28.3 | 459 | 209 | 62.0 | 101 | 0.813 | 420 | 480 | 20 | 0.64 | 0.04 | 0.14 | 36 | 95 | 18 |
| Oil W-1 ..... | 20.7 | 700 | 261 | 59.2 | 15 | 0.874 | 370 | 435 | 0 | 0.18 | 0.13 | 0.57 | 7 | 33 | 64 |
| Oil S-1 ..... | 28.5 | 593 | 256 | 66.0 | 88 | 0.810 | 480 | 550 | 10 | 0.03 | 0.03 | 0.12 | 52 | 111 | 6 |
| Oil E-2 ..... | 28.5 | 493 | 224 | 64.4 | 102 | 0.810 | 445 | 550 | 20 | 0.52 | ... | ... | 54 | 107 | 20 |
| Oil S-2 ..... | 28.8 | 473 | 209 | 60.4 | 90 | 0.810 | 460 | 520 | 0 | 0.02 | 0.03 | 0.13 | 93 | 168 | 4 |
| Oil T-1 ....Fleet test..... | 29.1 | 530 | 234 | 63.4 | 90 | 0.807 | 485 | 535 | 15 | 0.05 | 0.02 | 0.16 | 103 | 239 | 4 |
| Oil W-2 ..... | 20.1 | 462 | 187 | 52.8 | 25 | 0.882 | 375 | 425 | —10 | 0.13 | 0.07 | 1.33 | 8 | 24 | 77 |
| Oil W-3 ..... | 20.0 | 637 | 242 | 57.2 | 13 | 0.881 | 395 | 450 | —10 | 0.16 | 0.08 | 0.73 | 11 | 26 | 49 |
| Oil E-3 ....Second dynamometer.. | 29.5 | 456 | 210 | 63.2 | 106 | 0.804 | 435 | 500 | 20 | 0.53 | 0.05 | 0.07 | 222 | 236 | 19 |
| Oil T ..... | 28.9 | 506 | 222 | 62.2 | 90 | 0.809 | 455 | 530 | 5 | 0.05 | 0.03 | 0.15 | 91 | 187 | 3 |
| AF-1 ..... | 12.0 | 915 | 299 | 57.7 | —70 | 0.949 | 350 | 400 | 15 | 0.63 | 0.20 | 1.22 | ... | ... | ... |
| AF-2 ..... | 11.4 | 1,021 | 304 | 57.1 | —117 | 0.955 | 335 | 395 | 10 | 0.73 | 0.08 | 1.16 | 3 | 18 | 122 |
| Oil T+10 per cent AF-2 ..... | 21.1 | 512 | 223 | 61.0 | 82 | 0.822 | 430 | 505 | 10 | 0.07 | 0.04 | 0.25 | 11 | 44 | 25 |
| Oil T+20 per cent AF-2 ..... | 25.3 | 527 | 224 | 60.0 | 71 | 0.837 | 390 | 465 | 10 | 0.16 | 0.05 | 0.35 | 5 | 23 | 29 |
| Oil T+30 per cent AF-2 ..... | 23.1 | 547 | 228 | 60.0 | 65 | 0.854 | 400 | 465 | —15 | 0.20 | 0.04 | 0.45 | 4 | 16 | ... |
| Oil T+50 per cent AF-1 ..... | 19.9 | 607 | 238 | 58.1 | 32 | 0.881 | 370 | 430 | 0 | 0.21 | 0.13 | 0.65 | 4 | 17 | ... |
| Oil T+70 per cent AF-2 ..... | 16.4 | 713 | 260 | 57.4 | —10 | 0.910 | 365 | 410 | 0 | 0.32 | 0.09 | 0.86 | 3 | 11 | ... |
| Naphthenic fraction ..... | 19.7 | 698 | 262 | 59.8 | 22 | 0.882 | 405 | 475 | —5 | 0.43 | 0.14 | 0.89 | 19 | 22 | 62 |
| Oil T+50 per cent naphtha ..... | 24.3 | 570 | 238 | 60.5 | 63 | 0.844 | 380 | 440 | —5 | 0.18 | 0.08 | 0.51 | 15 | 33 | 59 |
| Wax ..... | 34.7 | ... | ... | 70.0 | ... | 0.765 | ... | ... | 165 | 0.40 | 0.07 | 0.14 | ... | ... | ... |

[a]From viscosity at 210° F. [b]Increase in kinematic viscosity at 130° F., after 50 hours of oxidation.

**DISTILLATION TESTS AT 1 MM. ABSOLUTE PRESSURE**

| Lubricant— | Observed vapor temperature at indicated percentage recovered (deg. F.) I.B.P. | 5% | 10% | 15% | 20% | 25% | 30% | 35% | 40% | 45% | 50% | 55% | 60% | 65% | 70% | 75% | 80% | 85% | 90% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil E-1 ..... | 380 | 407 | 417 | 425 | 341 | 436 | 441 | 446 | 452 | 459 | 467 | 478 | 495 | 515 | 546 | 584 | 612 | 649 | 702 |
| Oil E-2 ..... | 410 | 424 | 432 | 438 | 444 | 449 | 454 | 460 | 466 | 474 | 482 | 496 | 511 | 534 | 562 | 593 | 645 | 690 | 745[c] |
| Oil E-3 ..... | 388 | 417 | 429 | 439 | 447 | 454 | 460 | 466 | 471 | 478 | 485 | 496 | 513 | 539 | 570 | 597 | 647 | 695 | 750[c] |
| Oil T-1 ..... | 418 | 450 | 456 | 462 | 466 | 471 | 477 | 482 | 488 | 494 | 500 | 508 | 516 | 526 | 536 | 546 | 556 | 569 | 584 |
| Oil W-3 ..... | 322 | 347 | 366 | 380 | 392 | 401 | 410 | 417 | 424 | 431 | 437 | 444 | 450 | 458 | 466 | 475 | 485 | 497 | 514 |
| AF-1 ..... | 288 | 332 | 362 | 385 | 403 | 418 | 433 | 444 | 455 | 462 | 469 | 472 | 474 | 476 | 476 | 474 | 473 | 479 | 480[c] |
| Naphthenic fraction ..... | 314 | 352 | 379 | 397 | 411 | 421 | 429 | 435 | 440 | 444 | 448 | 454 | 459 | 464 | 471 | 478 | 487 | 497 | 510 |

[c]Extrapolated.

AF-1—Aromatic fraction from California waxy crude oil, produced as an extract in sulphur-dioxide-treatment of a propane-dewaxed distillate, subsequently treated with 98 per cent sulphuric acid and clarified by a light contact-clay treatment.
AF-2—Aromatic fraction from California asphaltic crude oil, produced as an extract in sulphuric-dioxide-treatment of an acid-treated distillate and clarified by a light contact-clay treatment.
E-1, E-2—Commercial Eastern or Pennsylvania oils containing residual fractions.
E-3—Solvent-treated Pennsylvania oil, produced experimentally by treatment of oil "E-2" with sulphur dioxide.
Naphthenic fraction—Naphthenic fraction from California waxy crude oil, produced as a sulphur-dioxide-benzene extract from a dewaxed and sulphur-dioxide-treated distillate, and subsequently treated with 80 per cent sulphur acid and clarified by contact-clay treatment.
S-1, S-2—Solvent-process oils from California waxy crude oil, produced experimentally by treatment of propane-dewaxed distillate with sulphur dioxide followed by sulphur-dioxide benzene, and with a final contract-clay treatment.
T, T-1—Commercial solvent-process oils from California waxy crude oil, produced similarly to "S-1" and "S-2."
W-1—Commercial Western oil, produced by acid and sulphur-dioxide-treatment of a distillate from California asphaltic crude oil.
W-2, W-3—Commercial Western oils, produced by acid treatment of distillates from California asphaltic crude oil.
Wax—Commercial petrolatum of 164° F. melting point and about 11 per cent oil content.

grams of iron per 1,000 miles of operation, was then calculated.

In developing the formula, it was assumed that, under the conditions of test:

1. Oil consumption is a straight-line function of miles of operation.
2. Iron wear is a straight-line function of miles of operation.
3. Oil consumed carries with it a proportional amount of iron.
4. Replacement oil, if added, is in small increments uniformly distributed over the run.

Based on these assumptions, the following approximate formula was derived:

$$W = \left[ DI_2 - CI_1 + (C - D + R)\frac{(I_1 + I_2)}{2} \right] \frac{1{,}000\,G \times 453{,}600}{4 \times 100\,(B - A)}$$

in which:

W = wear index, milligrams of iron per 1,000 miles.
A = speedometer reading when first oil sample is taken, miles.
B = speedometer reading when final oil sample is taken, miles.
C = original volume of oil, quarts.
D = volume of oil drained, quarts.
R = volume of replacement oil, quarts.
G = density of original oil, pounds per gallon.
$I_1$ = iron content of oil at A, per cent by weight.
$I_2$ = iron content of oil at B, per cent by weight.

The formula just given may be reduced to the following form, which is that used in the calculations:

$$W = \left[ (C + D)\,(I_2 - I_1) + R\,(I_1 + I_2) \right] \frac{567{,}000\,G}{B - A}$$

As a means of visualization, it is of interest that a wear-index value of 900 represents the removal through wear, in 1,000 miles, of the amount of iron in a Gillette razor blade.

### Wear Tests of Various Oils

After preliminary tests had shown that this method of determining wear would give dependable results, a series of test runs was made on a motor-dynamometer with a small six-cylinder engine of modern design, using typical eastern and western oils, and an experimentally-produced solvent-process oil produced from California waxy crude oil. In order to follow mechanical changes which might occur in the engine, runs were made at frequent intervals with a reference oil. The inspection data on all of the oils used in the work reported in this paper are given in Table 1, and data on the used oils from typical runs are given in Table 2. The wear indices obtained in this first series of dynamometer runs are given in Table 3. An examination of the individual wear-index values shown in Table 3 indicates that, although the reproducibility of the test is only moderate, the test definitely segregates different types of oil with regard to their wear-reducing ability. The eastern oil and the solvent process oil have generally similar wear-index values, while the typical acid-treated western oil from asphalt-base crude oil shows a definitely higher rate of wear.

TABLE 2—INSPECTION DATA ON TYPICAL USED OILS

| Lubricant: Test Series: | Miles run | Gravity | Vis. S. U. at 130°F. | Pour-point, °F. | Indiana Ppt. No. (milligrams per 10 G.) | ASTM Ppt. No. (milligrams per 10 G.) | Ash, % by wt. | Conradson carbon % |
|---|---|---|---|---|---|---|---|---|
| Oil E-1 ..1st dynamometer | 1,000 | 28.4 | 182 | 15 | 24.1 | 0.08 | 0.090 | 0.83 |
| Oil W-1 | 1,000 | 20.8 | 317 | —10 | 25.8 | 0.23 | 0.020 | 0.50 |
| Oil S-1 | 1,000 | 28.0 | 252 | 15 | 16.7 | 0.06 | 0.017 | 0.10 |
| Oil E-2 | 1,000 | .... | .... | .. | 12.1 | 0.03 | ..... | 0.84 |
| Oil S-2 | 1,000 | 29.2 | 179 | 5 | 19.7 | 0.02 | 0.020 | 0.25 |
| Oil T-1 ..Fleet test | 1,100 | 28.6 | 142 | 5 | 30.7 | 0.20 | 0.06 | 0.37 |
| Oil W-2 | 1,100 | 20.5 | 123 | —20 | 63.5 | 0.35 | 0.03 | 0.50 |
| Oil W-2 | 1,100 | 20.3 | 159 | —20 | 69.4 | 0.37 | 0.07 | 0.89 |
| Oil E-3 ..2d dynamometer | 1,500 | 28.7 | 213 | 20 | 12.6 | 0.05 | 0.005 | 0.99 |
| Oil T | 1,500 | 28.9 | 194 | 5 | 10.4 | 0.07 | 0.005 | 0.21 |
| AF-2 | 1,160 | 8.9 | 945 | 25 | 254 | 2.40 | 0.083 | 4.35 |
| Oil T+10 per cent AF-2 .. | 1,500 | 26.9 | 225 | 10 | 39.8 | 0.33 | 0.009 | 0.53 |
| Oil T+20 per cent AF-2 .. | 1,500 | 25.3 | 240 | 10 | 53.5 | 0.40 | 0.013 | 0.61 |
| Oil T+30 per cent AF-2 .. | 1,500 | 23.1 | 289 | —10 | 90 | 0.70 | 0.020 | 1.12 |
| Oil T+50 per cent AF-1 .. | 1,500 | 20.3 | 394 | 0 | 68.7 | 0.52 | 0.073 | 1.06 |
| Oil T+70 per cent AF-2 .. | 1,500 | 15.5 | 506 | 0 | 221 | 2.20 | 0.040 | 2.64 |
| Naphthenic fraction ..... | 1,500 | 18.7 | 321 | —5 | 47.3 | 0.40 | 0.020 | 1.62 |
| Oil T+50 per cent naphtha | 1,500 | 24.0 | 237 | —10 | 19.9 | 0.15 | 0.019 | 0.61 |
| Wax ..... | 1,500 | 33.7 | 67* | .. | .... | 0.90 | 0.030 | 0.81 |

*At 210° F.

TABLE 3—WEAR CHARACTERISTICS OF VARIOUS OILS AS SHOWN BY FIRST SERIES OF DYNAMOMETER RUNS

(Runs made on a small six-cylinder engine operating on a variable load and speed cycle equivalent to approximately 40 miles per hour road travel)

| Lubricant | Run No. | Viscosity index | Viscosity-gravity constant | Characteristics of original oil: Indiana Oxidation test (time for 10 Mg. sludge) (hours) | Indiana precipitation No. of used oil (milligrams per 10 G) | Wear index (milligrams of iron per 1,000 miles) | Average wear index | Relative wear index (per cent)* |
|---|---|---|---|---|---|---|---|---|
| Oil E-1 ... | 8 | 101 | 0.813 | 36 | 16.7 | 168 | ... | ... |
| | 11 | ... | ... | .. | 15.2 | 218 | ... | ... |
| | 13 | ... | ... | .. | 29.2 | 195 | ... | ... |
| | 16 | ... | ..... | .. | 33.1 | 145 | 184 | 100 |
| | 18 | ... | ..... | .. | 25.9 | 177 | ... | ... |
| | 21 | ... | ..... | .. | 34.1 | 200 | ... | ... |
| Oil W-1 .. | 12 | 15 | 0.874 | 7 | 25.8 | 263 | ... | ... |
| | 15 | ... | ..... | .. | 41.6 | 245 | 252 | 137 |
| | 19 | ... | ..... | .. | 58.4 | 182 | ... | ... |
| | 22 | ... | ..... | .. | 45.4 | 318 | ... | ... |
| Oil S-1 ... | 10 | 98 | 0.810 | 52 | 16.7 | 132 | ... | ... |
| | 14 | ... | ... .. | .. | 19.8 | 154 | 146 | 79 |
| | 20 | ... | ..... | .. | 23.7 | 150 | ... | ... |
| Oil E-2 ... | 38 | 102 | 0.810 | 54 | .... | †100 | ... | ... |
| | 39 | ... | ..... | .. | 19.1 | †68 | †84 | †100 |
| Oil S-2 ... | 36 | 99 | 0.810 | 93 | 19.7 | †84 | ... | ... |
| | 37 | ... | ..... | .. | .... | †95 | †79 | †94 |

* Wear index of test oil / Wear index of reference oil × 100. Oil "E-1" was used as reference oil in this series, except for the last four runs.

†Under slightly different operating conditions from previous tests.

(To Be Continued)

## Blowout Prevention and Control

(Continued from Page 16)

the ram type preventer; fourth, close the open mud line and divert the flow through the choked line which should be left open and in the clear at all times; and, fifth, open up the slush pump and force clean mud into the hole;

If the drill pipe is supported by the slips and the flow is serious, the second step is to close the ram rather than the slip type preventer, provided the pipe is centered or the rams are self-centering and a collar is not opposite the rams. Then close the slip type preventer and proceed with the other operations. Secondary blowouts have occurred because the drill pipe was lifted off the slips, allowing the flow of mud to rush through the rotary table and to completely disorganize operations;

11. Equip the drill pipe with back-pressure valves, the best type being the swing check. This equipment is advisable, but has its disadvantages as well as advantages. The chief factor in the control of primary blowouts is the time required to close the drill pipe opening. More time is required to put on the emergency swivel or Kelly than any other control operation. The first operation in blowout control without back-pressure valves is to stop the flow through the drill pipe and establish circulation. Back-pressure valves allow the immediate closing of the blowout preventers and the by-passing of the flow through the mud line. Connection to drill pipe can then be made without haste and confusion.

The disadvantages of back-pressure valves lie in the elimination of the use of wire line core barrels or bits. Coring then requires more frequent round trips, increasing the cost of drilling and the chances of swabbing the hole;

12. All gas-cut or sand-laden mud forced from the hole during a blowout should be directed to a disposal pit and only fresh, clean mud pumped into the hole;

13. Because most blowouts occur while pulling pipe out of the hole or running pipe into the hole, the Kelly, or circulating swivel, must be handled quickly and effectively and circulation established. When a primary blowout starts, then reliance must be placed upon the coolness, co-ordination and careful operation of the slip and ram type preventers;

14. Some operators prefer the use of a ram type blowout arrester directly above the casinghead with a ram type pressure operated master valve directly above and flanged to it. This arrangement permits backing off the drill pipe and setting the weight down upon the ram type preventer and closing the master valve. When this is accomplished, direct connection can be made into the top of the master valve, the master valve opened, and clean mud cycled down through the drill pipe and up and out through the outlets of the ram type preventer;

15. Some operators prefer the use of two companion ram type preventers separated and joined together by a flanged adapter, allowing for about 30 inches of space between them, together with a master valve above the top preventer. This arrangement permits not only the procedure outlined under Section 14 above, but also permits the lubrication of tool joints through the alternate opening and closing of two ram type preventers. In this technique, there must be either a back-pressure or blank choke valve in the drill pipe.

The equipment now available can be used in a number of combinations, the efficacy of which will depend principally on the condition of the equipment in use and the care and coolness of the operators. It is far better to prevent the primary blowout by efficient mud control, but primary blowouts will continue to occur and control equipment must then be relied upon for the prevention of secondary blowouts and wild wells;

16. The drilling crews must be trained in blowout control. A definite assignment of duties must be given to each member of the crew. Practice blowout drills should be performed frequently in order that each man can understand the chain of operations and properly time his efforts. The control equipment should be tested under pressure and packing inspected. The exact procedure to be followed will vary with the equipment used, the conditions existing, and the operator.

Probably the most efficient types of equipment are the stuffing box, or the pressure operated packer type of blowout controls, used in connection with external flush joint drill pipe. These devices were first developed for drilling wells under pressure. By their very design for the maintenance of pressure upon the well, this equipment will likewise hold the pressure generated in the well. Some of this equipment is made for use upon the Kelly joint only. These devices have a limited use, as very few primary blowouts occur when the Kelly is on the drill pipe. The two principal types of this equipment are fastened to the casing fittings and are in position for use at all times as long as the flush joint drill pipe is in the hole. One or more back-pressure valves are carried in the drill pipe. Operations are necessarily slowed down by full pressure equipment, but this is the price of protection.

### Pressure Operated Packers

The pressure operated packers are particularly well designed and give satisfactory service. Emergency or double packers are advisable so that if the upper or working packer requires replacement under pressure, the lower or emergency packer may be used until the working packer can be repaired. The main manufacturers of this type of equipment have also provided hydraulic rotaries, autocatic hold-down slips, round Kelly grips, and up and down snubbing devices.

The use of this equipment, because of its reliability in controlling blowouts, permits the operator to use a better, lighter, and cheaper mud. The per cent of solids carried in the mud can be reduced. Consequently the suspending agent can be reduced with the result of lowered gel rates, gel strengths, viscosities, and weights.

The use of pressure-drilling equipment, back-pressure valves, and chokes on the mud lines allow flush joint pipe to be pulled under pump pressure. This procedure will counteract all or a major part of the swabbing action at the bottom of the hole, as was pointed out in an article entitled, "Coming Out Under Pressure Handles Heaving Shale Problem."[7] In this case the imposed pressure is a cheap and satisfactory substitute for a more dense mud.

The ability of two of the standard pressure drilling systems to handle sudden primary blowouts was well demonstrated to the writer during the year of 1934 in the McFaddin area of Victoria County on several occasions.[4]

The wire line bit has possibilities in the reduction of blowout hazard. However, this device has some tendency to swab the well while pulling drill bits or cores. The use of the wire line stuffing box and circulating head is indicated and is available to minimize this swabbing. This apparatus may be used either through casing employed as drill pipe to be left later in the hole as casing, or through drill pipe, depending upon the size of hole to be drilled and problems to be met. It should also be borne in mind that the use of the wire line bit prevents the use of back-pressure valves in the drill pipe.

Regardless of the type or types of equipment to be used, the design and lay-out of the casing fittings and mud lines are vital. These lines should be as straight as possible; one line should always be choked; the other line should be susceptible of being choked in a minimum of time. The main choke line should be straight. Any necessity for by-passes should be taken care of in the open flow lines.

The point must be emphasized that, after the installation of the most satisfactory of the various available methods of control, then the safety program is up

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to the operative personnel. A good, careful driller will have the least trouble, because he is essentially a safe workman. He must be allowed to play safe and he must not be pushed for footage at the expense of safety. Above all, his supervisors must be blowout conscious. Blowouts may and will be prevented if the whole organization is behind this important safety program. Such a program will return exceptional dividends to the operator.

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## Company and Crew Are Proud of Drilling Record

(Continued from Page 12)

cipally due to the recurrence of an ailment of one of the men during the last days of drilling.

The last fishing job, caused by the breaking of drill pipe at 7,421 feet, was completed in the first run of a release overshot, other fishing jobs, considered serious holding up drilling but short periods because of the efficiency of the crews. Drilling to such an extreme depth and encountering a maximum of extreme hard formations with a minimum of troubles adds to the prestige of the men

*W. J. Walsh, drilling foreman on Gulf Production Co.'s No. 103 McElroy*

working on the well. From 8,350-9,400 feet a considerable amount of chert was logged; from 10,160-11,150 feet it was nearly all chert, drilling not progressing more than 6 inches in one day's time during many of the days in which this section was drilled. Extra hard dolomite from 5,800 to 7,000 feet resulted in the welding of the tool joints to prevent their breaking, which was a valuable precaution. Where the hole did not penetrate impregnable formations coring was carried on for specific information and purposes.

**Longest String of Casing**

The longest string of casing ever run was set and cemented at 10,301 feet in July, 1933. It took only 18 hours' running time to run this amount of 7⅝-inch, 2,800 pounds seamless pipe. Only 25 minutes was consumed in mixing and running 1,000 sacks of cement in the hole, about 5 minutes being lost when steam went down in the boilers because of the heavy draft by the two large cementing trucks, each containing three pumps working nearly at their limits. Six tons of ice were used in the cementing job to lower the temperature of the mixing water. The temperature of the hole at 10,631 feet, when pipe was run, was 148° F. The temperature of the hole at its present depth, 10,786 feet, is only 182.3°, much lower than the temperature in other deep tests in the district, even though they are much shallower.

The equipment used, especially that on which heavy stress and strain was placed

*Schlumberger crew making test for density and porosity of formations in Gulf Production Co.'s No. 103 McElroy, deepest test in the world*

in drilling, pulling pipe, and other heavy jobs, is proof that oil field equipment manufacturers have made great strides in the development and production of efficient material and equipment, the oil company production men and engineers co-operating with the manufacturers to obtain such equipment.

Setting the record of casing at 10,301 feet in July last year, was done preparatory to testing a good showing of oil logged from 10,564-10,630 feet. The test failed to reveal anything of importance so the test was carried deeper. A second test was made from 10,930-60 feet, 22½ bbls. of oil and 114 bbls. of salt water being produced in 24 hours. A third test was made at the present total depth, more water showing up. The second test was made on November 22, 1934, by swabbing through 2½-inch tubing with cone bottomed bull plug in bottom of the lower joint of the tubing. Air pressure was used behind the tubing and between the casing to raise the fluid level in tubing to aid in swabbing and testing, a small amount of oil and gas showing in the fluid at all times it was being swabbed. After swabbing the hole filled at the rate of 65.5 bbls. of fluid per day after casing pressure was built up by air.

From 11,300-11,600 feet shale and softer formations were logged, and from 12,658-12,720 feet the formation was more porous. The Ellenburger is believed to have been topped at 12,664 feet, but definite information has not been released as to certain geological data.

The August 16, 1934, issue of The Oil and Gas Journal carried a story on the test down to 10,631 feet and after the record string of casing was run and set. This story enumerated practically all equipment used on the test to that time. Drilling from 10,631 feet to 12,786 feet has been carried on in a 6¼-inch hole, using 3½-inch drill pipe with welded tool joints to prevent twist offs. A four-speed jack shaft drawworks was installed on February 5, 1935, at 11,081 feet, with new set of chains and rotary chains, to facilitate the deeper drilling. A new mud pump was also installed, and another 125-horsepower boiler added to make a quartet to furnish more power. These were the only additions or changes made in equipment, except reducing from 4½ to 3½-inch drill pipe in drilling the hole from 10,631 feet to the bottom.

**Cementing Back**

The crews are now swabbing to reduce or empty the hole of water so the hole can be cemented back to around 10,000 feet. The 7⅝-inch casing is to be perforated with a conventional casing perforating gun so the formations can be treated with acid behind the pipe. If the first plugging back and acidizing job fails to make a producer the hole will be plugged back to around 8,300 feet and a showing encountered from 8,120-8,200 feet will be tested after the casing is perforated and the formation given acid treatment. Both of these tests failing in lime of the Pennsylvanian age, it is estimated some 5,000 feet of the 10,301 feet of casing will be recovered, the remainder of this pipe and the 10¾-inch casing, of which there was 4,015 feet set in the hole, will be plugged with cement to around 3,000 feet where a Permian lime well is expected. As this test is in a prolific Permian lime producing area it is sure to make a producer from that formation.

The well will no doubt hold the drilling depth record for some time, and will stand as a monument commemorating the carefulness and efficiency of the drilling crews, and as a tribute to the engineering skill of both production engineers and men, and the manufacturers producing the drilling equipment and pipe now used in drilling exceptionally deep holes. It marks a great stride in deep well drilling and will probably lend incentive to carrying other holes to vast depths regardless of its failure to find the Ordovician pay hoped to be found in this area.

## California Operators Busy In Formulating Measures

(Continued from Page 14)

prevent waste and to assure the continuance of an adequate supply. The commission is also to be charged with determining the amount of oil which can be produced by the then existing wells and estimating the rate at which all the wells in the state are being depleted or the rate at which the potential capacity of the state is being increased or depleted. In addition, the commission is to be chargd with determining the amount and character of oil in storage and the rate at which storage oil is being depleted or increased.

With the foregoing as a basis, the committee is to establish the amount of oil that can be produced without waste but shall not deny any person, operator or producer the right to withdraw or to store oil; but when the commission shall find, after a proper hearing, that the addition to or withdrawals from storage are at such a rate as to constitute waste, it shall prohibit and stop such wasteful practice but shall at the same time indicate the rate of addition to, or the rate of withdrawal from, storage which would not be wasteful. The rate of withdrawal from storage in order to be wasteful shall be such rate which, by the absorption of the market which otherwise would be furnished from the daily production of oil wells in the state, thereby creates a situation resulting in waste by forcing into abandonment oil wells which otherwise would not be abandoned.

**Oil Umpire**

The oil umpire, subject to appointment and also subject to the rules and regulations of the commission, is to have charge of the preparation and issuance of any and all orders of the commission, and keep a record of the production of crude from all wells.

To make the act effective provision is made for institution of action in the Superior Court to force compliance with the orders or regulations of the petroleum commission. The cost of administering the act is to be paid by assessment against operators depending upon the amount of production and the actual operating cost.

**Definition of Waste**

The act seeks to prevent both physical waste and waste incident to failure to apply the lifting power of natural gas. The spacing, locating and drilling of oil wells on such a spacing or location program as results in an unreasonable waste of oil or which results in the loss in the ultimate recovery thereof or which results in the unreasonable dissipation of the reservoir energy is waste; provided, however, that any authority to prohibit waste shall so limit its orders, rules and regulations applying to the location or spacing of wells as to make the same applicable only to the locating, spacing and drilling of wells in fields or pools discovered after the effective date of the act. The provisions of this act shall be construed consistently with the act of June 4, 1931, known as the town lot drilling act. The act also provides that whenever wells are drilled in a new field at a rate that would result in excessive waste the commission shall have authority to order operators to formulate a drilling program and any failure to do so shall be authority for the commission to place in effect its own plan for orderly development.

## J. Edgar Pew Predicts Producers Better Off

PHILADELPHIA, Pa., June 1.—J. Edgar Pew, vice president, Sun Oil Co., has issued the following statement:

"Beginning June 1 the Sun Oil Co. will pay a monthly bonus of 5 per cent to all employes now receiving $2,500 or less per year.

"Under the complicated system of codes which has existed for two years, production costs have become greater and greater, and the purchasing power of our people has become less and less, thus definitely and surely reducing our standards of living.

"We feel that the workers of the country have nothing to fear and everything to gain as a result of the Supreme Court's decision declaring the NRA dead, and that the country can now go ahead to a great and permanent prosperity.

"As to the employe and management unit council plan which in the past has operated so successfully both for the employes and management of the Sun Oil Co., it is the management's desire to continue unimpaired the activities of the various unit councils. The unit councils in the past have settled, on a friendly and reasonable basis, many problems of mutual interest, and it is the management's conviction that in the future, through these councils, any new problems which may arise can be properly and promptly settled without interference on the part of any state or federal Government or any outside influences.

"As to the effect of the Supreme Court's decision on producers of oil. We have always believed that control of crude production was purely a state matter, and that the only function of the federal Government was to help the states, through its authority over interstate commerce, in executing the states' laws. The Connally act amply covers this and it is still the law. It is my judgment that in Texas the laws are now adequate, and that with the thorough enforcement of these laws there is no reason for any collapse of the crude oil market. Rather, with proper enforcement the producers will be much better off than they have ever been. All producers should now unite to urge federal approval of the interstate compact to the end that the oil producing states may co-operate in making their oil conservation programs completely effective."

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## The Industry's Position

So far as the oil industry is concerned the scrapping of the code was a distinct gain. It removed the most threatening danger that beset the oil business—complete Federal control in every department.

The Supreme Court decision came at a most fortunate time when the industry had worked its way out of its own particular depression caused by overproduction and was leading the country in recovery from the general demoralization of business.

All competent observers agree that the oil business is in better shape today than it has been for years. Overproduction of crude has been mastered by the co-operation of the industry and the states. The production of gasoline is being approximated to the demand, and the labors of the stabilization committee under the direction of Mr. Arnott are giving promise of enduring achievement.

The one fear that overhung the industry was extension of bureaucratic control from Washington aiming to make the oil business a mere governmental service in which the men who had developed it would have no say. It was realization of the imminence of that danger that spurred the industry and the states to the co-operation that put the industry in good shape. It is inconceivable that with the passing of that peril the states and the industry are going to abandon all the progress that has been made towards stabilizing this all important business.

Washington talk about 35 cent wheat and 5 cent cotton did not extend to 25 cent oil because the industry knows that dollar crude has been maintained by the industry for nearly two years in spite of the failure of the code.

The most constructive feature of the period has been the freedom with which oil men have consulted and co-operated on the problems of the business. It is thanks to that and not to any code that the industry is in better shape than for many years.

The elimination of the code, with the overthrow of bureaucratic usurpation at Washington, and the assurance that the oil business can not be sovietized, removes the one uncertainty that was hampering the industry. It is now free to make full speed ahead.

Stabilization is at hand, in production, manufacturing and marketing. We are entering the period of peak consumption with rising markets and rising demand that promises to surpass all records for domestic consumption.

The measure of known fields has been taken and fear of overproduction has been supplanted by anxiety about future reserves. Increased drilling has failed to disclose any new prospective flood of oil. In all the 75 years of oil history there has been but one East Texas and there may never be another. And with present day consumption the big fields of other days would be quickly absorbed.

The country will have need for the individual enterprise and initiative of the oil man in the years ahead, the unconquerable spirit that "jests with destiny" and, undaunted by disappointment, presses on.

These personal qualities of audacity and dogged persistence could not be found in official robots operating under a bureaucracy entangled in the red tape and routine of Washington.

Happily the oil industry has been freed from that possibility. And not only the oil industry, but all industry and business, the nation at large. For that was where we were drifting, to a numbered and fingerprinted status where the citizen would be submerged in the soviet.

The trend was inescapable, if pursued. There was no half way house between two diametrically antagonistic theories of economics. "A little right of center," or "a little left of center," of which so much has so frequently been heard, was meaningless except as a description of a cork bobbing in a whirlpool.

The existing social order cannot be saved by discarding its fundamentals and substituting the theories of socialism. Government cannot regulate production, wages and hours and stop there. To be consistent it must pass on to regulation of consumption, costs and profit, the whole gamut of nationalization, socialism or communism.

That was the inherent danger in the Federal code system. If "the nation could not exist half slave and half free" neither could it carry on half individualistic and half communist. A clash or a collapse was certain.

Failure to get the scheme to work provoked clamor for more control, further deviation "left of center". It was recognition of this trend that alarmed the country. The steadily expanding invasion of Federal control into increasing numbers of individual lines of business threatened to become an avalanche.

One led to another, until people began to ask, where can it stop? Meanwhile bureaucracy became more arrogant, assuming the attitude of masters rather than servants of the people.

At the same time experience was exposing the experiment. The new system was not accomplishing what had been promised. It was not eradicating chiseling. It was not abolishing abuses. The emotional revival had been succeeded by a general backsliding.

The scheme stood condemned because it did not do what was expected and because it was recognized as dangerous, subversive alike of individual rights and the constitutional rights of the 48 states. Americans pay a high price for state government but in the light of the Supreme Court decision this decentralization of authority is proving a protective bulwark against concentration of control at Washington under either a dictator or a soviet.

The oil industry, which has been more immediately menaced by Federal bureaucracy than any other, is ready to continue co-operation with the States. Congress should approve the interstate compact promptly and leave the industry and the states free to complete the stabilization of this great business which is so vitally necessary to general recovery.

There never was any reason, in the first place, for picking out the petroleum industry for special Federal regimentation. It was doing its job well, supplying an essential product at a price consistently lower than all other commodities and universally accessible. Its problems were internal, caused by its own super-efficiency and most easily solved by itself if permitted.

In addition to the excellent service it gives the public its operations develop enormous business for other industries, and contribute hundreds of millions annually to State and Federal treasuries. It should be encouraged to continue its work rather than being penalized.

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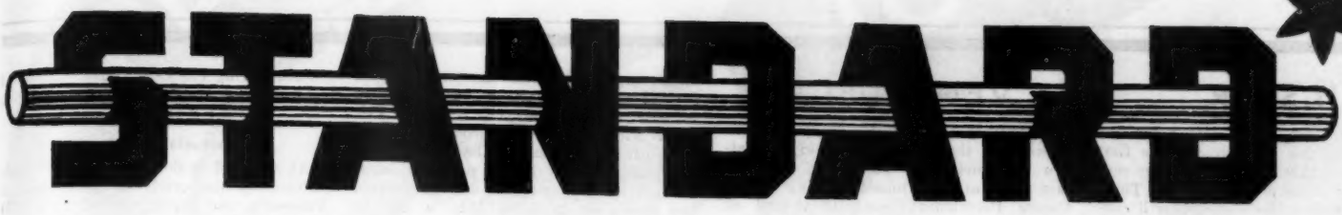

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# NEWS FROM FOREIGN LANDS

## U. S. S. R.

Exports of crude oil and petroleum products from the U.S.S.R. for the first two months of this year were 16 per cent less than the same period in 1934. These data indicate that the U.S.S.R. will continue to be a less important factor in world oil markets in 1935 than in 1934. The exports for the latter year were less than in 1933. Exports of some refinery products have in fact declined more than 50 per cent from the peak and exports of crude petroleum oil for the first two months were of no consequence.

Available data on crude oil production and refinery output for the first three months show that operations are on practically the same basis as in 1934. Thus the drop in exports indicate an increase in domestic demand or substantial addition to storage. Considerable crude was run to storage last year and refined products were stored at strategic points.

The following table gives the exports of crude and refined products for the first two months of 1935 and 1934 (data in barrels):

| | 1935 | 1934 |
|---|---|---|
| Fuel oil | 235,476 | 220,230 |
| Gasoline | 129,531 | 177,737 |
| Gas oil | 73,467 | 86,019 |
| Kerosene | 40,322 | 84,351 |
| Lubricating oil | 29,399 | 24,511 |
| Diesel oil | 9,100 | 11,685 |
| Asphalt | 2,466 | 2,428 |
| Petroleum wax | 2,290 | 1,261 |
| Crude oil | 49 | 28,432 |
| Miscellaneous oils | 167 | 8 |
| Total | 542,261 | 639,662 |

## ITALY

The Azienda Generale Italiana Petroli (A.G.I.P.) is rebuilding the cracking facilities of the Italian refinery at Mestre near Venice. When completed the units will have a capacity sufficient to furnish 1,800 to 2,000 bbls. of gasoline daily. The enlargement in the capacity of the units will enable the A.G.I.P. to furnish a larger percentage of its domestic gasoline requirements from domestic refineries. The company, which is controlled by the Italian Government, has additional plans for the expansion of its cracking facilities.

To reduce Italy's dependence upon outside sources for motor fuels, the Beet & Sugar Corp. recently presented a plan to the central corporative committee to increase production of alcohol suitable for use in motors, according to a report from the Commerce Department's Rome office, made public by the chemical division, Bureau of Foreign and Domestic Commerce. According to the plan, production would be increased to 1,000,000 hectoliters within four years and proposes that it shall be made obligatory for producers and importers of motor fuels to use sufficient alcohol mixed with gasoline to absorb the increased production. The proportion of alcohol required would be fixed by law, the report states.

The plan calls for the creation of a central purchasing and distributing office which would acquire all alcohol produced and distribute it to importers and producers of gasoline at prices fixed by the state. The contemplated output in 1935 would be from 100,000 to 150,000 hectoliters; 1936, 500,000 hectoliters; 1937, 800,000 hectoliters, and 1938, 1,000,000 hectoliters. All output of 1,000,000 hectoliters of alcohol will require a 50 per cent increase in the present sugar beet acreage, according to estimates. Arrangements have already been made for a 5 per cent increase during the current year, the report states.

## VENEZUELA

A further increase in crude oil production in the Quiriquire Field of eastern Venezuela this year was indicated last week at the annual meeting of the Creole Petroleum Corp. (Standard of New Jersey subsidiary) held in New York. In reply to inquiries from stockholders officials of the company gave information regarding the field's operations in addition to that contained in the annual statement. The latter showed that the average production of the Quiriquire Field in 1934 was 37,590 bbls. which was a 100 per cent gain over the average production in 1933. In April of this year the average production was 56,400 bbls. daily.

It was explained that the company expects to drill approximately 40 wells in the field during 1935 and this will probably increase the present production before the end of the year. At present approximately 35,000 bbls. daily of the crude is shipped to Aruba Island, D.W.I., where a Standard subsidiary has a large refinery; 15,000 bbls. to United States; 2,500 bbls. to Canada; 1,400 bbls. to Cuba and 1,500 bbls. to France.

The annual statement of the Creole gave information regarding operations in Quiriquire and other parts of eastern Venezuela with data on the company's operations in Cumarebo and the Lake Maracaibo region reviewing developments for 1934 with indicated trends for 1935. In regard to production E. Holman, president of the company, said: "The total of the company's net production and purchased royalty oil was 19,390,275 bbls., a daily average of 53,124 bbls. This was 5,522,226 bbls. or 39.8 per cent more than the 13,868,049-bbl. total for 1933. A comparison by fields with 1933 is given below:

| | 1933 | 1934 |
|---|---|---|
| Cumarebo* | 2,606,044 | 2,822,016 |
| Quiriquire | 6,756,702 | 13,721,766 |
| Lake Parcels* | 3,497,323 | 2,814,800 |
| Others | 7,980 | 30,693 |

*Company's share from partly owned property.

"Ninety-one per cent of the 1934 crude was produced by natural flow, 5 per cent by gas lift and 4 per cent by pumping.

"The daily average gross production of the Cumarebo Field declined from 13,033 bbls. a day in January, 1934, to 9,249 bbls. in December, a reduction of 21.6 per cent in the year's daily average compared to 1933. Production from the Quiriquire Field rose from a daily average of 27,309 bbls. in January to 41,660 bbls. a day in December. The average daily production for the year was 37,594 bbls.

"Standard Oil Co. of Venezuela's share of the production from the joint interest Lake Parcels operated by the Venezuela Oil Co. was 19.5 per cent less than last year. This decline in production was, however, arrested late in the year through the pumping and repair program inaugurated by the operators and production had increased to 9,306 bbls. a day in December, after reaching a low of 6,514 bbls. daily in September.

"At the close of the year the Standard Oil Co. of Venezuela had oil concessions for exploration and development totaling 8,857,000 acres, most of which were wholly owned. Exploration drilling was continued throughout the year in both eastern and western Venezuela, but was not marked by the discovery of any new oil fields.

"Twenty-six new wells were completed in the Cumarebo Field in 1934, of which 17 were oil producers and 4 were gas wells. In the Quiriquire Field 37 new wells were completed in 1934, of which 34 were oil wells. Most of the drilling was confined to the proven portion of the field and very satisfactory producing wells were obtained. Some of the wells started in the latter part of the year have indicated a slight extension northward in the central portion of the field, but in the other directions its extent has been fairly well defined.

"A considerable number of the older wells which stopped flowing have been equipped for pumping and are producing at very satisfactory rates. The injection of surplus gas into the formations has been continued throughout the year.

"In total, 73 wells were drilled or worked over in 1934, involving a total of 189,008 feet of new hole drilled as compared to 101,313 feet drilled in 1933. The new oil handling facilities for Quiriquire and Caripito upon which construction was begun in 1933 were completed and are in use. The oil transfer station at Guiria is in partial operation and final completion is expected within a few weeks. The principal items of permanent construction now under way are a new steel and concrete wharf on the San Juan River at Caripito and a marine railway at Guiria upon which barges and smaller floating craft may be drawn out of the water for inspection and repairs. Considerable additions to the marine equipment have been made in preparation for more active development of the swamp and delta country that can be reached only by boats.

"Seventy-one vessels loaded 3,795,481 bbls. of Cumarebo crude, and 180 oversea tankers took 12,513,526 bbls. of crude oil, 582,837 bbls. of fuel oil, and 34,203 bbls. of gas oil from eastern Venezuela during 1934. Geological investigations of the areas within which the company holds concessions have been actively continued during the year and have resulted in a number of favorable prospects being recommended for drilling."

*Deep sea loading terminal of Standard Oil Co. of Venezuela at Guiria in Eastern Venezuela*

### Venezuelan Production

As reported in the May 16 issue of this publication the crude oil production in Venezuela for April totaled 11,471,344 bbls. which compares with 11,028,600 bbls. The corrected production by fields is as follows (data in barrels):

| | April | |
|---|---|---|
| | 1935 | 1934 |
| Lagunillas | 6,207,145 | 5,540,000 |
| La Rosa-Ambrosia | 1,782,335 | 2,050,000 |
| Mene Grande | 910,000 | 1,219,900 |
| Quiriquire | 1,692,448 | 1,067,800 |
| Tarra | 437,460 | 560,900 |
| Cumarebo | 335,836 | 331,130 |
| Concepcion | 116,790 | 150,900 |
| El Mene | 75,800 | 88,400 |
| La Paz | 15,530 | 19,870 |
| Total | 11,471,344 | 11,028,600 |

## FRANCE

Crude oil runs to stills at French refineries are now running in excess of 90,000 bbls. daily according to government reports covering imports for the first quarter of this year. The report shows the crude oil imports for the first three months totaled 1,169,820 tons which is equivalent of 91,000 bbls. daily. There is in addition approximately 1,500 bbls. of domestic crude oil production available to French refineries. The crude oil imports for the first quarter of 1934 were 75,000 bbls. daily.

The increased crude oil imports account for the declines in imports of several refinery products. The only products to show increases were fuel oil and petroleum coke. Gasoline imports decreased approximately 50 per cent with a still larger decline in gas oil which has been widely used in the past in cracking operations. The bulk of the crude oil now being imported into France comes from Iraq. The following table shows the imports of crude oil and refinery products for the first quarter of 1935 and 1934 (data in tons):

| | 1935 | 1934 |
|---|---|---|
| Crude oil | 1,169,820 | 959,781 |
| Gasoline | 151,091 | 311,118 |
| Fuel oil | 109,300 | 78,700 |
| Gas oil | 36,000 | 102,000 |
| Lubricating oil | 24,900 | 40,600 |
| Petroleum coke | 6,640 | 5,000 |
| Kerosene | 4,390 | 14,200 |
| Road oil | 5,000 | 7,830 |

## GREAT BRITAIN

Production of motor fuel (petrol) from coal will start next month at Billingham, England, plant of the Imperial Chemical Industries, Ltd. The plant was partially completed several months ago and has been producing petrol from creosote oil and low temperature tar. This motor fuel is being distributed in England by Shell-Mex B.P. and the Anglo-American Oil Co. These companies are large distributors of motor fuels refined from crude petroleum in the United Kingdom.

The facilities to utilize coal at the Billingham plant are completed and commercial operation will start in June. Within a short time it is expected that the plant will be on a basis of 150,000 tons of petrol annually of which 100,000 tons will come from coal. There will be several other products manufactured at the plant which represents an expenditure of approximately $15,000,000. The petrol manufactured at the plant is exempt from certain taxes collected on petrol obtained from petroleum.

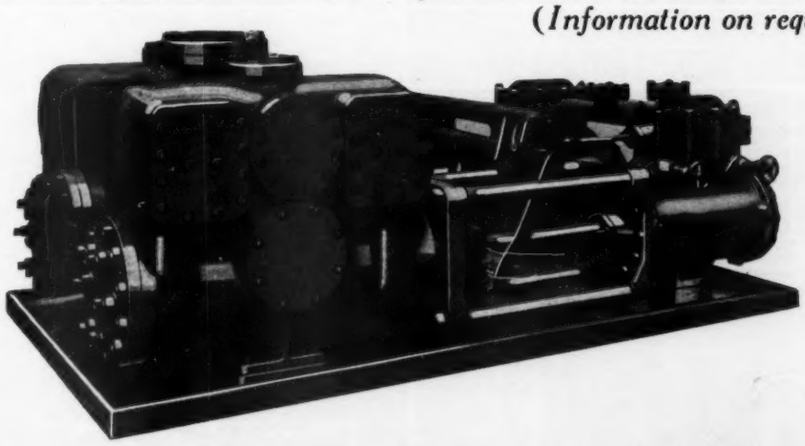
# The temperature of the fluid pumped is immaterial

The new TRANSIT Heavy Duty Block Valve Pump was designed to handle either hot or cold liquids or semi-liquids around refineries. The material pumped is introduced and expelled from the pump through large direct fluid passages that cannot trap air, and through special design valves now made larger than ever.

This pump can be operated so hot that the fluid end will glow on a dark night, and so cold that frost will form on the fluid end. No trouble will be experienced from loose valve stems, loose valve guards, or loose separate valve seats, because such things are not part of this pump.

Pumping hot tar around 700 degrees Fahrenheit is hard on rod packing. So the stuffing boxes are made deeper to lessen wear on the packing and rods. Tie-bar construction renders the stuffing boxes easier of access, thereby inviting more frequent and accurate adjustment.

*(Information on request)*



## NATIONAL TRANSIT PUMP AND MACHINE CO.

OIL CITY, PENNSYLVANIA

NEW YORK - PHILADELPHIA - CHICAGO - CLEVELAND - PITTSBURGH - LOS ANGELES - HOUSTON - TULSA

Standard Supply and Hardware Company
New Orleans,
Louisiana

The Republic Supply Company of California
2122 East Seventh Street,
Los Angeles, California

F. C. Richmond Machy. Co.
320-326 West Second South St.
Salt Lake City, Utah

Reeves & Skinner Machy. Co.
2211 Olive Street,
St. Louis, Missouri

Pratt-Gilbert Co.
Phoenix,
Arizona

Frick-Reid Supply Corp.
108 N. Trenton Ave.
Tulsa, Oklahoma

# Group 3 Gasoline Trade in Good Spirits Though Rains Turn Motoring Into Marine Adventure

By T. F. SMILEY

Although further kicked and cuffed by the weather man, the Group 3 gasoline market was in fairly good spirits this week. Torrential rains had converted motor travel into pretty much of a marine adventure in many areas, but demand stiffened and tank car quotations for low-octane material rose an eighth.

The market got comfort out of the fact that schools were closing for the summer, marking the beginning of the vacation season, which soon will be under full headway. Feeling throughout the trade was that tourist travel would be heavy this year, and prospects for profitable business were regarded as bright.

Uneasiness created by the sudden popping out of the codes was still in evidence, but reassurance was increasing as belief grew that the oil industry would hold gains it had made.

### Want Inter-Refinery Buying to Stay

Opinion strengthened that inter-refinery buying, conceded to have been the prime factor in bringing about the high degree of stabilization now prevailing in the Mid-Continent territory, would not be interrupted. Clearly the integrated companies which have been doing the buying, on the one hand, and virtually all the small independent refiners without retail outlets of their own on the other, have no wish to see the program interfered with. Nevertheless a watchful eye was being kept on persons suspected of a penchant for flinging monkey-wrenches.

It was pointed out that refinery allocations, which have played an important part in keeping production of motor fuel in line with consumer demand, were known to be unenforceable by law anyway, but were observed because common sense, fair play and farsighted self-interest showed that course to be the wise one. So since the impelling force behind compliance with allocations was a spirit of co-operation inside the industry rather than a club brandished from outside, no marked fundamental change in the situation is apparent.

It was recognized all the time that as the price of gasoline reached more profitable levels the danger of some individual refiner stepping up his output or shading quotations in order to draw business from a competitor increased. No informed person denies that this danger is present now, not because the codes have been removed, but because neither Congress, the President nor the Supreme Court can eradicate selfishness.

### Further Benefits May Be Gained

Several hopeful and powerful considerations are operative in this connection. One is that even selfishness, if not overshaded by blind stupidity, should impel the refiner who has benefited from inter-refinery buying and allocation of runs to join in their preservation so that he may obtain further benefits.

Another is that a large percentage of the small refiners are dependent upon large companies for their crude supplies. No major is likely to continue to sell crude to a refiner known to be employing methods calculated to wreck the structure upon which a profitable market has been built.

Moreover, most of the large Mid-Continent companies are buying gasoline at this juncture not simply because, under the "big brother" program, they had said they would, but because they need the gasoline. Stocks are reported to be relatively low as the motor fuel division of the industry enters its season of heaviest consumption.

Following the invalidation of the codes meetings have been arranged for by the National Oil Marketers Association, the directors of the American Petroleum Institute, and the Planning and Coordination Committee (without legal standing now, but still representative of the petroleum industry). These meetings were expected to help in pointing the way to such self-imposed regulation as may be required.

### Natural Gasoline Standing Still

The natural gasoline market was standing still, with enough demand to keep surplus output moving. Most of this movement was to the Gulf, some of the material going to refineries in that area and some to storage for shipment later either coastwise to the East or foreign ports. Export inquiries were reported to have been increasing in the last week.

This time of year is expected to be a quiet one for natural gasoline, but the market patterns of the past are no longer a trustworthy guide and it is not believed the unprofitable lows of the 1935 chart will be touched this summer.

Kerosene, which rose to unusual strength in May this year, was showing an inclination to sag and tank car quotations were off an eighth. Demand for kerosene as a tractor fuel was not as brisk as it should have been owing to plowing operations being impeded by rains. Many had expressed the opinion that the excellent kerosene market would hold till threshing operations came along to strengthen the demand, but freakish spring weather has made dents in that view.

### Weather Again Blamed

Conditions which exerted a depressing effect on kerosene operated in much the same way on the burning oil group, and

(Continued on Page 32)

## Refined Oil Market Barometer

With the closing of schools throughout the country marking the beginning of the vacation season the motor fuel and lubricant groups are manifesting better feeling. Opinion is general that good motoring weather would have a pronounced effect on consumption and profits. Uneasiness over the possible results of invalidation of the codes is less marked and there is growing confidence that following a relatively brief period of uncertainty the market in petroleum products will be on a sounder basis.

**Mid-Continent.**—Gasoline up. Natural at standstill. Kerosene and burning oils off. Lubricants improving.

**East Coast.**—Gasoline export market advancing. Residual fuels strong. Domestic wax better. Rest of market unchanged.

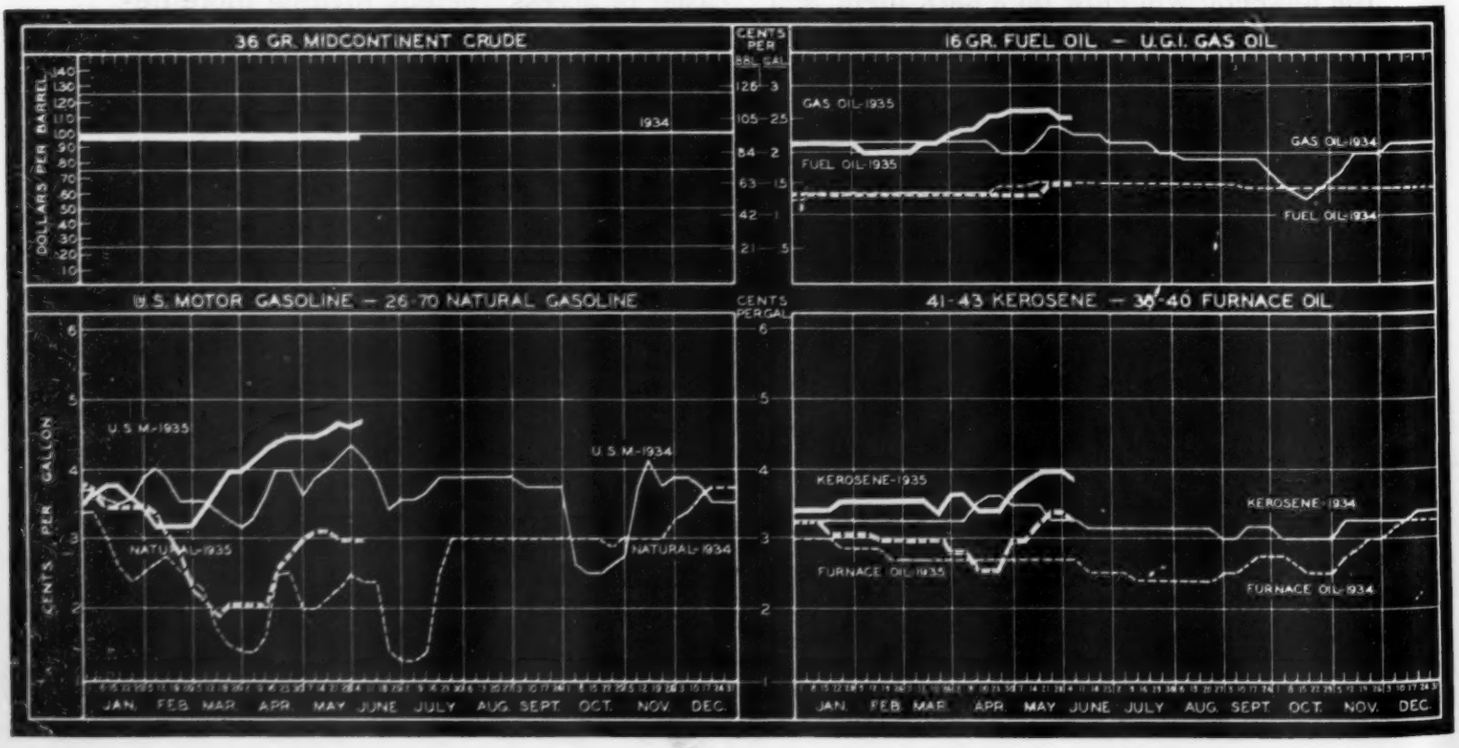
**Gulf Coast.**—Gasoline slower. Kerosene steady. Fuels and gas oils firm. Lubricants inactive. Prices generally holding, but not strong.

**Pennsylvania.**—Gasoline strong. Increased vigor in residuals. Present levels expected to hold.

**California.**—Market generally weak. Gasoline soft. Natural irregular.

**Chicago.**—Gasoline firm. Kerosene quieter. Heating oils easy.

## Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



# Advance Export Prices on Steam Refined Stocks and Gasoline in Eastern Refinery Markets

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, June 3.—Generally steady tank car and consumer prices prevailed in eastern domestic markets over the past week as buyers and sellers endeavored to determine the significance of the ending of the N.R.A. as applied to the oil industry. It is possible that the Supreme Court decision postponed additional price increases in motor fuels which were predicted for the first of June. However, there were sellers who were not favorable to additional price increases until later in the month, and it is not certain that increases would have been generally supported had they been made effective. A few manufacturers have continued to mark up their prices on steam refined stocks and bright stocks for both export and domestic movement with the hope that these products can approach normal quotations by the end of the month. Export gasoline prices have also been advanced at the Gulf with cargo sales for July delivery at the higher schedules.

Regarding the probable effect of the N.R.A. suspension in refinery markets, trade opinions vary from extreme pessimism to the optimistic viewpoint of those who feel that it will have little if any bearish results in the near future with the long range outlook much better than it would have been with a continuance of federal code operations. The pessimism which has been reflected in oil securities markets comes from those who contend that the N.R.A. has been responsible for any improvement in markets since the law became effective in the oil business. They assume with the demise of the code that all efforts to maintain a balance in supply and demand and other forms of control, including marketing practices, will prove futile with the final conclusion that prices will collapse and operations again become generally unprofitable.

### Code Not Effective

The foregoing a year or 18 months ago might have been a majority opinion but it now represents the attitude of a minority in the trade. Dissatisfaction with the N.R.A. petroleum code has been spreading rapidly in recent months among all classes of operators and the reactions of the past week to a willingness of a majority to return to hazards of private operations as opposed to the restrictions and failures under attempted code applications.

So far as the near term outlook for prices is concerned a majority feel that if declines develop, it will not be due to the N.R.A. suspension but will be brought about by conditions over which past experience has shown government control is helpless in correcting. They point to the fact that so far as refinery tank car and consumer prices on gasoline are concerned that over the greater part of the time the N.R.A. was effective, prices were too low in relation to posted crude oil schedules and other costs for a majority of the industry. Although they tried, government representatives were not able to correct price-war conditions in which net quotations in some cases dropped to the lowest levels in the history of the business. These price conditions have improved in recent months but there is nothing to indicate that the codes had anything to do with this development. The low prices ended when those responsible tired of losses and welcomed a return to normal price levels—the usual procedure before the N.R.A. codes were offered as a panacea for marketing troubles. In fact, there is evidence that some of these price-war conditions which in some sections became general were prolonged due to the fact that under the code provisions it was impossible to apply the remedies needed to bring about a quick return to normal levels.

### Conditions Unchanged

It is conceded that some of the original regulations under the codes as applied to marketing practices were constructive and desirable. This includes the loaning of equipment and the efforts to bring about uniform agreements covering various classes of distributors and consumers. A breakdown in this phase of the code's application has been apparent for several months. Individual operators have found means to circumvent practically everything that has been done in this regard and code authorities have been unable to enforce practices to which a large majority subscribed and made every effort to carry out. What has been accomplished along this line has been due to the conviction of individual companies that certain practices were undesirable from the standpoint of profits to their own companies and they have refused to return to them even after some of their competitors have violated directly or indirectly the code provisions.

With this general marketing situation in mind it is impossible for many to share the alarm of those who claim that the code suspension will mean a return to ruinous practices. The answer to this contention is that its sponsors have an exaggerated opinion as to what the code accomplished in this regard with actual conditions at the expiration of the code differing little from those prevailing at the start. In many cases marketing units of all classes are worse off due to unfair labor provisions.

In brief, a majority feel that the petroleum code under the N.R.A. brought a number of arbitrary rulings which were burdensome to a majority of the industry without adequate compensation with the certainty that this situation would become more and more objectionable in the future. The N.R.A., it is conceded, contributed to the establishment of a $1 base price for Mid-Continent crude oil, but it was never able to bring about an enforcement of crude oil production allowables to the point where conditions would permit refiners to advance their prices in line with these crude oil schedules over a long enough period to assure a yearly profit.

### Supply and Demand

Some progress has been made in recent weeks in bringing about a more equitable relationship in the several markets of the industry applying to crude oil schedules, refinery and retail prices. This has been accomplished largely through state control and voluntary agreements which are still available to the industry. Probably of even greater importance has been the workings of the natural law of supply and demand in which large new supplies of crude have been conspicuous by their absence, a development pointing to higher prices for which neither the government nor the industry can claim credit.

The foregoing summary of representative opinions in this section has been given in this market report in an attempt to answer the question, "How will it affect prices?" which is always the query of buyers and sellers when any new situation arises. The majority answer in this case appears to be that nothing has happened of a fundamental nature in regard to future prices. The industry still has the necessary machinery to control crude oil production, which is the basic solution of any marketing problem in the industry. Provided the industry maintains an equilibrium in supply and demand it seems reasonable to conclude that present prices can be maintained with further advances in quotations as conditions justify. At the same time the marketing situation in this territory is not "foolproof" and any efforts to increase output and shipments not justified by demand will bring lower prices as has always been the case in the past.

### Prices

Practically all factors in the gasoline export market again advanced prices during the past week. Today the U. S. Motor grade at the Gulf was quoted at 5¼ cents; 400 endpoint 5¼ to 5¾ cents; 390 endpoint 5⅜; and 64-66, 375, 5½ cents.

These prices are still below the prevailing quotations in Europe where the Rumanian market has been especially strong over the past month. Last week a cargo of U. S. Motor for July loading was placed at 5¼ cents and 64-66, 375 endpoint at 5⅜ cents. There were other inquiries in the market previous to the announcement of the Supreme Court decision. It is anticipated that foreign buyers will stay out of the market as much as possible to determine the significance of the decision in regard to material available at the Gulf.

The domestic tank car markets are unchanged, ranging in New York harbor from 5¾ cents for low octane to 6½ cents for ethylized branded grades.

Manufacturers of Pennsylvania steam refined stocks advanced their prices from one-half to 1 cent per gallon. 600 S.R. for export in barrels is now quoted at 16½ cents per gallon, 600 flash 19 cents and 630 flash 24 cents. The price range on No. 8 bright is 23½ to 24 cents. The 200-3 color Pennsylvania in barrels for export is quoted at 28 to 30 cents.

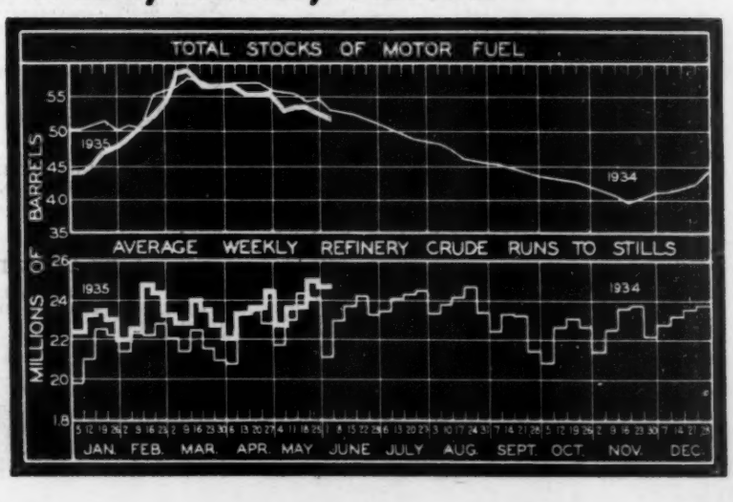
Prices on fuel oils, gas oils, Diesel fuel and wax are generally unchanged. The residual fuel oil market is consid-

(Continued on Page 37)

## American Petroleum Institute Weekly Refinery Statistics

**Week Ending June 1, 1935**

| | Capacity reporting per cent | Daily crude runs (bbls.) | Finished motor fuel (bbls.) | Gas oil and fuel oil (bbls.) |
|---|---|---|---|---|
| East Coast | 100.0 | 531,000 | 16,849,000 | 9,967,000 |
| Appalachian | 94.8 | 92,000 | 2,123,000 | 686,000 |
| Indiana, Illinois, Kentucky | 95.9 | 343,000 | 9,502,000 | 4,254,000 |
| Oklahoma, Kansas, Missouri | 84.8 | 249,000 | 5,453,000 | 4,103,000 |
| Inland Texas | 48.5 | 70,000 | 1,206,000 | 1,898,000 |
| Texas Gulf | 96.4 | 500,000 | 5,692,000 | 9,280,000 |
| Louisiana Gulf | 96.4 | 121,000 | 1,452,000 | 3,428,000 |
| North Louisiana and Arkansas | 90.0 | 59,000 | 299,000 | 292,000 |
| Rocky Mountain | 61.9 | 42,000 | 1,002,000 | 782,000 |
| California | 92.6 | 469,000 | 9,602,000 | 64,046,000 |
| Total United States | 89.5 | 2,476,000 | 53,180,000 | 98,736,000 |



# REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

## Refinery Gasoline

| | June 4 | | May 28 | |
|---|---|---|---|---|
| **OKLAHOMA (Group 3)—** | | | | |
| U. S. Motor grades: | | | | |
| Below 63 octane | .04¾ | .04⅞ | .04⅝ | .04¾ |
| 63-70 octane | .05½ | .05⅝ | .05½ | .05⅝ |
| 60-62 400 grade: | | | | |
| Below 63 octane | .04¾ | .04⅞ | .04¾ | .04⅞ |
| 63-70 octane | .05½ | .05⅝ | .05½ | .05⅝ |
| 64-66 375 | .04⅞ | .05 | .04¾ | .04⅞ |
| 68-70 360 | .05 | .05⅛ | .04⅞ | .05 |
| **NORTH TEXAS—** | | | | |
| U. S. Motor grades: | | | | |
| Below 63 octane | .04¾ | .04⅞ | .04¾ | |
| 63-70 octane | .05½ | .05⅝ | .05⅜ | .05⅝ |
| 60-62 400 | .04¾ | .04⅞ | .04⅝ | .04¾ |
| 64-66 375 | .04⅞ | .05 | .04¾ | .04⅞ |
| **NORTH LOUISIANA (Ark., N. La. & Miss. del.)—** | | | | |
| U. S. Motor grades: | | | | |
| Below 63 octane | .05¼ | | .05¼ | |
| 63-70 octane | .06 | | .06 | |
| 60-62 400 | .05¼ | | .05¼ | |
| **ARKANSAS (Ark., N. La. & Miss. del.)—** | | | | |
| U. S. Motor grades: | | | | |
| Below 63 octane | .05¼ | | .05¼ | |
| 63-70 octane | .06 | | .06 | |
| **CHICAGO (based on Oklahoma Group 3)—** | | | | |
| U. S. Motor grades: | | | | |
| Below 63 octane | .04¾ | .04⅞ | .04⅝ | .04¾ |
| 63-70 octane | .05½ | .05⅝ | .05½ | .05⅝ |
| 60-62 400 | .04¾ | .04⅞ | .04⅝ | .04¾ |
| 64-66 375 | .04⅞ | .05 | .04¾ | .05 |
| 68-70 360 | .05 | .05⅛ | .04¾ | .05 |
| Aviation fighting grade | .05⅝ | .05¾ | .05⅝ | .05¾ |
| **PENNSYLVANIA (inland refineries)—** | | | | |
| 58-60 U. S. Motor: | | | | |
| Below 60 octane | .05¾ | | .05½ | |
| 60-64.9 | .06¾ | .07 | .06¾ | |
| 65-70 octane | .07⅛ | .07¼ | .07 | |
| 68-70 350 | .06½ | .06¾ | .06½ | |
| 54-58 U. S. Motor | .06 | .07 | .07 | .08 |
| **CALIFORNIA (domestic movement)—** | | | | |
| 58-60 400 | .06½ | .07¼ | .07¾ | .08¾ |
| **EAST COAST—** | | | | |
| U. S. Motor, below 60 octane: | | | | |
| *New York (Bayonne) | .05¾ | | .05¾ | |
| Philadelphia | .06¼ | | .06¼ | |
| Boston | .06 | | .06 | |
| Baltimore | .06 | .06¼ | .06 | .06¼ |
| Charleston, S. C. | .06 | | .06 | |
| U. S. Motor, 65 and above: | | | | |
| *New York (Bayonne) | .06¼ | | .06¼ | |
| Philadelphia | .06½ | | .06½ | |
| Boston | .06¼ | | .06¼ | |
| Baltimore | .06¼ | | .06¼ | |
| Charleston, S. C. | .06¼ | | .06¼ | |

*All grades of gasoline one-fourth cent less for small barge shipments.

| | | | | |
|---|---|---|---|---|
| **GULF COAST (domestic)—** | | | | |
| U. S. Motor: | | | | |
| Below 60 octane | .05 | .05¼ | .05¼ | |
| 60-64.9 octane | .05¼ | .05½ | .05¼ | .05½ |
| 65 octane and higher | .05½ | | .05½ | |

## Naphtha

| | June 4 | | May 28 | |
|---|---|---|---|---|
| **PENNSYLVANIA (inland refineries)—** | | | | |
| 50-52 (blending) | .05⅜ | .05½ | .05⅜ | .05½ |
| 52-54 450 (blending) | .05⅝ | .05½ | .05⅝ | .05½ |
| 54-56 450 (blending) | .05⅝ | .05½ | .05⅝ | .05½ |
| 50-52 450 (blending) | .05⅜ | .05½ | .05⅜ | .05½ |
| **CHICAGO (based on Oklahoma Group 3)—** | | | | |
| 50-52 450 (blending) | .05¾ | .05 | .04⅝ | .04¾ |
| Cleaners' naphtha, 56-58 gr., 200 i.b.p., 320 e.p. | .06⅞ | .07 | .06⅞ | .07 |
| Lacquer diluent, 180 i.b.p., 250 e.p. | .07⅞ | .08 | .07⅞ | .08 |
| Lacquer diluent, 140 i.b.p., 200 e.p. | .08⅞ | .09 | .08⅞ | .09 |
| Rubber solvent, 68-70 gr., 100 i.b.p., 300 e.p. | .06⅞ | .07 | .06⅞ | .07 |
| Stoddard solvent, 300 i.b.p., 410 e.p., over 83° flash | .06⅜ | .06½ | .06⅜ | .06½ |
| Pet. thinner, 290-300 i.b.p., 410 e.p., over 83° flash | .06⅜ | .06½ | .06⅜ | .06½ |
| V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p., 330 e.p. | .06⅞ | .07 | .06⅞ | .07 |
| Petroleum spirits | .05⅞ | .06 | .05⅞ | .06 |

## Natural Gasoline

| | June 4 | | May 28 | |
|---|---|---|---|---|
| **OKLAHOMA (Group 3)—** | | | | |
| Grade 26-70 | .03 | .03⅛ | .03 | .03⅛ |
| Grade 18-55 | .03¾ | .04 | .03¾ | .04 |
| Low vapor pressure grades: | | | | |
| 14 lb. v.p. (max.) | .04¼ | .04½ | .04¼ | .04½ |
| 12 lb. v.p. (max.) | .04⅝ | .04¾ | .04⅝ | .04¾ |
| **NORTH TEXAS—** | | | | |
| Grade 26-70 | .03 | | .03 | |
| Grade 18-55 | .03¾ | .03⅞ | .03¾ | .03⅞ |
| Low vapor pressure grades: | | | | |
| *14 lb. v.p. (max.) | .04¼ | .04⅜ | .04¼ | .04⅜ |
| *12 lb. v.p. (max.) | .04⅝ | | .04⅝ | |

*Nominal.

| | | | | |
|---|---|---|---|---|
| **NORTH LOUISIANA (Ark., N. La. & Miss. del.)—** | | | | |
| Grade 26-70 | .03¼ | | .03¼ | |
| **CALIFORNIA—** | | | | |
| 75-85 375 | .05 | .06 | .05½ | .06¼ |

## Kerosene

(All kerosenes water white)

| | June 4 | | May 28 | |
|---|---|---|---|---|
| **OKLAHOMA (Group 3)—** | | | | |
| 41-43 | .03⅞ | .04 | .04 | .04⅛ |
| 42-44 | .04 | .04⅛ | .04⅛ | .04¼ |
| **NORTH TEXAS—** | | | | |
| 40-41 | .03¾ | .03⅞ | .03¾ | .03⅞ |
| 41-43 | .03⅞ | .04 | .03⅞ | .04 |
| **NORTH LOUISIANA (Ark., N. La. & Miss. del.)—** | | | | |
| 41-43 | .04⅛ | | .04⅛ | |
| **ARKANSAS (Ark., N. La. & Miss. del.)—** | | | | |
| 41-43 | .04¼ | | .04¼ | |
| **PENNSYLVANIA (inland refineries)—** | | | | |
| 45 | .04¾ | | .04¾ | |
| 46 | .04⅞ | | .04⅞ | |
| 47 | .05½ | | .05 | |
| **CHICAGO (based on Oklahoma Group 3)—** | | | | |
| 41-43 | .04 | .04½ | .04 | .04½ |
| 42-44 | .04⅛ | .04¼ | .04¼ | .04⅜ |
| **CALIFORNIA (Pacific Coast consumption)—** | | | | |
| 38-40 high burning test | .04½ | .05 | .04½ | .05½ |
| **NEW YORK (Bayonne, N. J.)—** | | | | |
| 41-43 | .05 | | .05 | |
| **GULF COAST (domestic)—** | | | | |
| 41-43 | .04¼ | .04½ | .04¼ | .04½ |

## Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area)
(Refineries will absorb freight to 80 cents a ton)

| | June 4 | May 28 |
|---|---|---|
| Pile run | 5.75 | 5.75 |
| Direct from still | 6.75 | 6.75 |
| Egg, nut, pea | 8.00 | 8.00 |
| Lump | 8.00 | 8.00 |

## Furnace Oil

| | June 4 | | May 28 | |
|---|---|---|---|---|
| **OKLAHOMA (Group 3)—** | | | | |
| No. 1 prime white, 38-42 | .03⅜ | .03½ | .03½ | .03⅝ |
| No. 1 straw, 38-40 | .03¼ | .03⅜ | .03⅜ | .03⅝ |
| No. 2 straw, 32-36 | .02⅞ | .03⅛ | .02⅞ | .03⅛ |
| No. 2 dark, 32-36 | .02⅝ | .02⅞ | .02⅝ | .02⅞ |
| No. 3, 28-32 | .02½ | .02¾ | .02½ | .02¾ |
| No. 3, 15 and above, 28-32 | .02⅜ | .02½ | .02⅜ | .02½ |
| **NORTH TEXAS—** | | | | |
| No. 1 prime white, 38-42 | .03⅜ | .03½ | .03½ | .03⅝ |
| No. 1 straw, 38-40 | .03¼ | .03⅜ | .03⅜ | .03½ |
| **NORTH LOUISIANA (Ark., N. La. & Miss. del.)—** | | | | |
| No. 2, 32-36 | .03¼ | .03¼ | .03⅛ | .03¼ |
| **ARKANSAS (Ark., N. La. & Miss. del.)—** | | | | |
| No. 2, 32-36 | .03½ | | .03½ | |
| No. 3, 28-32 | .03¼ | | .03¼ | |
| **CHICAGO (based on Oklahoma Group 3)—** | | | | |
| No. 1 prime white, 38-40 | .03½ | .03¾ | .03⅝ | .03¾ |
| No. 1 straw, 38-40 | .03⅜ | .03½ | .03½ | .03⅝ |
| No. 2 straw, 32-36 | .03⅛ | .03¼ | .03⅛ | .03¼ |
| No. 2 dark, 32-36 | .02⅞ | .03 | .02⅞ | .03 |
| No. 3 zero to 15, 28-32 | 1.02½ | 1.07½ | 1.02½ | 1.07½ |
| No. 3, 15 and above, 28-32 | .72½ | .77½ | .72½ | .77½ |
| **NEW YORK (Bayonne, N. J.)—** | | | | |
| No. 1 | .05 | | .05 | |
| No. 2 | .04 | | .04 | |
| No. 4 | .03¾ | .04 | .03¾ | .04 |

## Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

| | June 4 | | May 28 | |
|---|---|---|---|---|
| **OKLAHOMA (Group 3)—** | | | | |
| U.G.I. gas oil | .02½ | .02⅝ | .02½ | .02⅝ |
| No. 4, 24-28 | .87½ | .90 | .87½ | .90 |
| No. 4, 15 and above, 24-28 | .75 | .80 | .75 | .80 |
| No. 5 | .70 | .75 | .70 | .75 |
| No. 6 | .67½ | .70 | .67½ | .70 |
| Below 18 fuel oil, industrial | .65 | .67½ | .65 | .67½ |
| **NORTH TEXAS—** | | | | |
| U.G.I. gas oil | .02½ | .02⅝ | .02½ | .02⅝ |
| No. 4, 24-28 | .87½ | .90 | .87½ | .90 |
| No. 5 | .72½ | .75 | .72½ | .75 |
| No. 6 | .67½ | .70 | .67½ | .70 |
| Below 18 fuel oil, industrial | .65 | .67½ | .65 | .67½ |
| **NORTH LOUISIANA (Ark., N. La. & Miss. del.)—** | | | | |
| U.G.I. gas oil | .02⅞ | .03 | .02⅞ | .03 |
| 10-14 fuel oil, industrial | .75 | .80 | .72½ | .77½ |
| **ARKANSAS (Ark., N. La. & Miss. del.)—** | | | | |
| 10-14 fuel oil, industrial | .60 | .65 | .60 | .65 |
| **CHICAGO (based on Oklahoma Group 3)—** | | | | |
| U.G.I. gas oil | .02½ | .02⅝ | .02½ | .02⅝ |
| No. 4, 24-28 | .87½ | .90 | .87½ | .90 |
| No. 4, 15 and above 24-28 | .72½ | .77½ | .72½ | .77½ |
| No. 5, 18-22 | .67½ | .70 | .67½ | .70 |
| No. 6, 10-16 | .57½ | .60 | .57½ | .60 |

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel in all these areas.

| | | | | |
|---|---|---|---|---|
| **PENNSYLVANIA (inland refineries)—** | | | | |
| 30-40 | .04⅛ | .04¼ | .04⅛ | .04¼ |
| **CALIFORNIA—** | | | | |
| Los Angeles: | | | | |
| 30-34 gas oil, per bbl. | 1.05 | 1.25 | 1.15 | 1.25 |
| 27 plus Diesel | 1.05 | 1.25 | 1.15 | 1.25 |
| 27 plus Diesel (bunkers) | 1.25 | 1.30 | 1.25 | 1.30 |
| 12-16 (bunkers at tidewater) | .89 | .95 | .87 | .95 |
| 10-16 (cargo lots) | .75 | .90 | .75 | .90 |
| 12-17 (tank cars) | .60 | .95 | .65 | .95 |
| San Joaquin Valley: | | | | |
| 10-18 (tank cars) | .60 | .75 | .60 | .75 |
| San Francisco: | | | | |
| 27 plus Diesel, per bbl. | 1.25 | | 1.25 | |
| 27 plus Diesel (bunkers) | 1.35 | | 1.35 | |
| 10-16 (bunkers) | 1.00 | | 1.00 | |
| **GULF COAST—** | | | | |
| 28-30 gas oil | .03½ | .03⅝ | .03½ | .03⅝ |
| 28-30 Diesel (bunkers) | 1.70 | | 1.70 | |
| Bunker C (bulk cargoes) | .85 | .90 | .85 | .90 |
| Bunker C (bunkers) | .95 | 1.00 | .95 | 1.00 |
| **NEW YORK (Bayonne, N. J.)—** | | | | |
| 27 plus, gas oil | .04 | .04¼ | .04 | .04¼ |
| 28-30 Diesel (lighterage 6½ cents per bbl.) | 1.89 | | 1.89 | |
| 28-30 Diesel (tank cars) | .04¼ | | .04¼ | |
| *Bunker C (to ocean-going ships in N. Y. harbor) | 1.15 | | 1.15 | |
| Industrial fuel (tank cars) | .03¾ | .04 | .03¾ | .04 |

*Lighterage charge 5 cents per barrel additional.

## Neutral Oil

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

| | June 4 | | May 28 | |
|---|---|---|---|---|
| **OKLAHOMA (Group 3)—** | | | | |
| Zero to 10 Cold Test: | | | | |
| 150-3 | .10 | | .10 | |
| 180-3 | .11¼ | | .11¼ | |
| 180-4 | .10¾ | | .10¾ | |
| 200-3 | .11¾ | | .11¾ | |
| 200-4 | .11¼ | | .11¼ | |
| 240-3 | .13¾ | | .13¾ | |
| 240-4 | .13¼ | | .13¼ | |
| 280-3 | .14¾ | | .14¾ | |
| 280-4 | .14 | | .14 | |
| 300-3½ | .15¼ | | .15¼ | |
| 400-4 | .17¼ | | .17¼ | |
| 100-2 paraffin oil | .05¾ | | .05¾ | |
| 15-20 Cold Test: | | | | |
| 200-3 | .10¾ | | .10¾ | |
| 200-4 | .10¼ | | .10¼ | |
| 240-3 | .12¾ | | .12¾ | |
| 240-4 | .12¼ | | .12¼ | |
| 280-3 | .13¾ | | .13¾ | |
| 280-4 | .13 | | .13 | |
| **GULF COAST—** | | | | |
| Pale Oils: | | | | |
| 200-3 | .07 | .07½ | .07 | .07½ |
| 300-3 | .07½ | .08 | .07½ | .08 |
| 500-3½ | .08½ | .09 | .08½ | .09 |
| 750-3½ | .09 | .09¼ | .09 | .09¼ |
| 1,200-3½ | .09½ | .09¾ | .09½ | .09¾ |
| 2,000-4 | .09¾ | .10 | .09¾ | .10 |
| Red Oil: | | | | |
| 200-5-6 | .07 | .07¼ | .07 | .07¼ |
| 300-5-6 | .07¼ | .07½ | .07¼ | .07½ |
| 500-5-6 | .08 | .08½ | .08 | .08½ |
| 750 | .08½ | .09 | .08½ | .09 |
| 1,200-5-6 | .09¼ | .09½ | .09¼ | .09½ |
| **CALIFORNIA (moving to domestic market)—** | | | | |
| Pale Oils: | | | | |
| 100-2½-3 | .07½ | .07⅝ | .07½ | .07⅝ |
| 200-2½-3 | .08 | .08¾ | .08 | .08¾ |
| 300-3-3½ | .09 | .10 | .09 | .10 |
| 350-3-4 | .10½ | .11 | .10½ | .11 |
| 400-3-4 | .12 | .12¼ | .12 | .12¼ |
| 450-3-4 | .12½ | .12¾ | .12½ | .12¾ |
| 550-3-4 | .13 | .13½ | .13 | .13½ |
| 600-3-4 | .13½ | .14 | .13½ | .14 |
| Red Oils: | | | | |
| 200-4-5 | .08½ | .09 | .08½ | .09 |
| 300-5-6 | .09 | | .09 | |
| 350-5-6 | .10 | .10¼ | .10 | .10¼ |

| | | | | |
|---|---|---|---|---|
| 400-5-6 | .10½ | .10¾ | .10½ | .10¾ |
| 450-5-6 | .11 | .11¼ | .11 | .11¼ |
| 500-5-6 | .11½ | .11¾ | .11½ | .11¾ |
| 600-5-6½ | .12 | .12¾ | .12 | .12¾ |
| 700-6½ plus | .13 | .13¼ | .13 | .13¼ |
| 750-6½ plus | .13½ | .13¾ | .13½ | .13¾ |
| 900-6½ plus | .14 | .14½ | .14 | .14½ |
| PENNSYLVANIA— | | | | |
| 150 vis. at 70° F., 3 color, 400-405 flash: | | | | |
| Zero pour test | .20½ | .21 | .20½ | .21 |
| 10 pour test | .19½ | .20 | .19½ | .20 |
| 15 pour test | .19 | .19½ | .19 | .19½ |
| 25 pour test | .18 | .18½ | .18 | .18½ |
| 180 vis. at 70° F., 3 color: | | | | |
| 20 pour test | .21 | .21½ | .21 | .21½ |
| 200 vis. at 70° F., 3 color: | | | | |
| Zero pour test | .25½ | .26 | .25½ | .26 |
| 10 pour test | .24½ | .25 | .24½ | .25 |
| 15 pour test | .24 | .24½ | .24 | .24½ |
| 25 pour test | .23 | .23½ | .23 | .23½ |

## Bright and Steam Refined Stocks

| OKLAHOMA (Group 3)— | June 4 | | May 28 | |
|---|---|---|---|---|
| Bright Stocks: | | | | |
| 190-200 D | .17½ | | .17½ | |
| 150-160 D, 0-10 | .14½ | | .14½ | |
| 150-160 D, 10-25 | .14 | | .14 | |
| 150-160 25-40 | .13½ | | .13½ | |
| 150-160 E | .13½ | | .13½ | |
| Steam refined: | | | | |
| 630 green (treated) | .09½ | | .08½ | .09½ |
| 600 light green (untreated) | .08½ | | .07 | .08 |
| 600 dark green (untreated) | .05 | .06 | .05 | .06 |
| PENNSYLVANIA— | | | | |
| Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 510; 540-550 flash): | | | | |
| 10 pour test | .20 | .20½ | .20 | .20½ |
| 15 pour test | .19 | .19½ | .19 | .19½ |
| 20 pour test | .18 | .18½ | .18 | .18½ |
| 25 pour test | .17 | .17½ | .17 | .17½ |
| Steam refined: | | | | |
| 600 | .09½ | .10 | .09¼ | .09½ |
| 650 | .11 | .11½ | .11 | .11½ |
| 600 Pennsylvania flash | .12 | .12½ | .12 | .12½ |
| 630 flash | .17 | .17½ | .17 | .17½ |
| 600 Warren E filtered | .13 | .13½ | .13 | .13½ |

## Wax and Petrolatum

(Prices per pound)

| OKLAHOMA (Group 3)— | June 4 | | May 28 | |
|---|---|---|---|---|
| 124-126 white crude scale | .02 | .02¼ | .02 | .02¼ |
| PENNSYLVANIA (inland refineries)— | | | | |
| 122-124 | .0210 | .0215 | .0210 | .0215 |
| 124-126 | .0215 | .0220 | .0215 | .0220 |
| NEW YORK— | | | | |
| Wax (a.m.p.) in bags fully refined: | | | | |
| Refined grades: | | | | |
| 123-125 | .0380 | | .0380 | |
| 125-127 | .0400 | | .0400 | |
| 128-130 | .0425 | | .0425 | |
| 130-132 | .0440 | | .0440 | |
| 133-135 | .0500 | | .0500 | |
| 135-137 | .0525 | | .0525 | |
| Crude scale: | | | | |
| 124-126 w.s. | .0200 | .0225 | .0200 | .0225 |
| 124-126 y.s. | .02 | .0215 | .02 | .0215 |
| Petroleum in barrels in carload lots: | | | | |
| Dark green | .01⅞ | | .01⅞ | |
| Amber | .02⅞ | .03 | .02⅞ | .03 |
| Extra amber | .03 | .03⅛ | .03 | .03⅛ |
| Lily white | .06⅝ | .06¾ | .06⅝ | .06¾ |
| Snow white | .07¾ | .07⅞ | .07¾ | .07⅞ |
| Cream | .05⅝ | .05¾ | .05⅝ | .05¾ |
| CHICAGO (f.o.b. switching district)* | | | | |
| 122-124 wax | .0440 | .0450 | .0440 | .0450 |
| 125-127 wax | .0465 | .0475 | .0465 | .0475 |
| 127-129 wax | .0480 | .0490 | .0480 | .0490 |
| 130-132 wax | .0540 | .0550 | .0450 | .0550 |
| 132-134 wax | .0565 | .0575 | .0565 | .0575 |

*Cents per pound on carload lots in burlap bags of 225 lbs. approx. Add 3° a.m.p.

## Export Prices

GASOLINE

| GULF COAST— | June 4 | May 28 |
|---|---|---|
| U. S. Motor | .05¼ | .04¾ |
| 60-62 400 | .05¼ .05⅜ | .04⅞ |
| 61-63 390 | .05⅜ | .05 |
| 64-66 375 | .05½ | .05⅛ .05¼ |
| LOS ANGELES: | | |
| U. S. Motor grades: | | |
| 53-55 octane | .04 | .04 |
| 55-65 octane | .04 .04¼ | .04 .04¼ |
| 65-67 octane | .04¼ .04½ | .04¼ .04½ |
| 67-69 octane | .04½ .04¾ | .04½ .04¾ |
| Above 69 octane | .04¾ .05 | .04¾ .05 |
| 58-60 400 endpoint | .04½ .05 | .04½ .05 |

KEROSENE

| GULF COAST— | | | | |
|---|---|---|---|---|
| 41-43 prime white | .03⅞ | .04 | .03⅞ | .04 |
| 41-43 water white | .04 | .04¼ | .04 | .04¼ |
| 44 water white | .04¼ | | .04¼ | |
| LOS ANGELES: | | | | |
| 41-43 water white | .04½ | .05 | .04½ | .05 |

LUBRICANTS

| NEW YORK (f.a.s. in bbls.)— | | | | |
|---|---|---|---|---|
| Cylinder Stocks: | | | | |
| 600 Warren E | .20 | | .19½ | |
| 600 S.R. unfiltered | .16½ | .17 | .15½ | |
| 650 S.R. unfiltered | .18 | | .16½ | .17 |
| 600 flash S.R. | .19 | .19½ | .17½ | .18 |
| 630 flash S.R. | .24 | .24½ | .21½ | .22 |
| Bright Stocks: | | | | |
| 8 color | .23½ | | .23 | .23½ |
| 6½ plus colors in dilution | .22½ | | .22 | .22½ |

NEUTRAL OIL

| | | | | |
|---|---|---|---|---|
| 200-3 color | .28 | .30 | .28 | |
| 150-3 color | .23 | .25 | .23 | |

PARAFFIN WAX (Fully Refined)

| NEW YORK (prices per pound): | | | | |
|---|---|---|---|---|
| 123-125 a.m.p. | .03625 | | .03625 | |
| 125-127 a.m.p. | .0375 | | .0375 | |
| 128-130 a.m.p. | .0400 | | .0400 | |
| 130-132 a.m.p. | .0425 | .0450 | .0425 | .0450 |
| 133-135 a.m.p. | .0475 | | .0475 | |
| 135-137 a.m.p. | .05 | | .05 | |
| Crude scale: | | | | |
| 124-126 w.s. | .0210 | .0220 | .0210 | .0220 |
| 124-126 y.s. | .0205 | .0210 | .0205 | .0210 |

# Crude Oil Gravity Table

| Gravity— | Oklahoma and Kansas 1 | North Texas, Central Texas and East Central Texas 2 | North Louisiana and Arkansas 3 | Gray County, Texas 4 | Carson, Hutchinson and Moore Counties, Texas 5 | Conroe, Texas 6 | Salt Creek, Wyo. 7 | Gulf Coast, Texas and Louisiana 8 | Gulf Coast Texas and Louisiana 9 | Cotton Valley, Louisiana 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Below 20 | .... | .... | .... | .... | .... | .... | .... | $ .82 | $.82 | .... |
| 20-20.9 | .... | .... | .... | .... | .... | .... | .... | .84 | .84 | .... |
| 21-21.9 | .... | .... | .... | .... | .... | .... | .... | .86 | .86 | .... |
| 22-22.9 | .... | .... | .... | .... | .... | .... | .... | .88 | .88 | .... |
| 23-23.9 | .... | .... | .... | .... | .... | .... | .... | .90 | .90 | .... |
| 24-24.9 | .... | .... | .... | .... | .... | .... | .... | .92 | .92 | .... |
| Below 25 | *$.76 | .... | .... | .... | .... | .... | .... | .... | .... | $.70 |
| 25-25.9 | * .78 | .... | .... | .... | .... | .... | .... | .94 | .94 | .72 |
| 26-26.9 | * .80 | .... | .... | .... | .... | .... | .... | .96 | .96 | .74 |
| 27-27.9 | *.82 | .... | .... | .... | .... | .... | .... | .98 | .98 | .76 |
| 28-28.9 | *.84 | .... | .... | .... | .... | .... | .... | 1.00 | 1.00 | .78 |
| Below 29 | .84 | $.79 | $.79 | .... | .... | .... | $ .84 | .... | .... | .... |
| 29-29.9 | .86 | .81 | .81 | .... | .... | .... | .86 | 1.02 | 1.02 | .80 |
| 30-30.9 | .88 | .83 | .85 | .... | .... | .... | .88 | 1.04 | 1.04 | .82 |
| 31-31.9 | .90 | .85 | .85 | .... | .... | .... | .90 | 1.06 | 1.05 | .84 |
| 32-32.9 | .92 | .87 | .87 | .... | .... | .... | .92 | 1.08 | 1.06 | .86 |
| 33-33.9 | .94 | .89 | .89 | .... | .... | .... | .94 | 1.10 | 1.07 | .88 |
| 34-34.9 | .96 | .91 | .91 | .... | .... | .... | .96 | 1.12 | 1.08 | .90 |
| Below 35 | .... | .... | .... | $ .79 | $ .69 | .... | .... | .... | .... | .... |
| 35-35.9 | .98 | .93 | .93 | .81 | .71 | $1.09 | .98 | 1.12 | 1.09 | .92 |
| 36-36.9 | 1 00 | .95 | .95 | .83 | .73 | 1.11 | 1 00 | 1.12 | 1.10 | .94 |
| 37-37.9 | 1 02 | .97 | .97 | .85 | .75 | 1.13 | 1.02 | 1.12 | 1.11 | .96 |
| 38-38.9 | 1.04 | .99 | .99 | .87 | .77 | 1.15 | 1 04 | 1.12 | 1.12 | .98 |
| 39-39.9 | 1 06 | 1 01 | 1.01 | .89 | .79 | 1.17 | 1 06 | 1.12 | 1.13 | 1 00 |
| 40 and over | 1 08 | 1 03 | 1 03 | .91 | .81 | 1.19 | 1 08 | 1.12 | 1.14 | 1.02 |

Effective December 3, 1934, Panhandle Refining Co., purchasing oil in North Texas, posted below 29 degrees, 68 cents; 29-29.9 degrees, 70 cents, with 2 cents added for each additional degree up to 40 and over, 92 cents.

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedule: Below 25°, 76 cents; 25-25.9°, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08; Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedules at below 29°, 84 cents, excepting Philtex Oil Co., which begins with below 31° at 88 cents.

Column 1—Effective September 29, 1933, Texas Co. of Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Philtex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; October 1, by Barnsdall Refineries, Inc., in Oklahoma.

Column 2—Effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective January 14, 1935, in the Van Pool, Van Zandt County, Pure Oil Co. posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03.

Column 3—Effective September 29, 1933, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25°, 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03

Column 4—Effective September 29, 1933, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day, Philtex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 5—Effective September 29, 1933, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Philtex Oil Co. posted below 31°, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 6—Effective September 29, 1933, by Humble Oil & Refining Co. and Tide Water Oil Co., and on September 30 by Texas Co., which on September 29 had posted a schedule of $1.07 to $1.12 with a 1-cent spread on each degree.

Column 7—Effective September 29, 1933, by Stanolind Oil & Gas Co.

Column 8—Effective September 29, 1933, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana, 20-20.9°, 84 cents, with 2 cents added for each degree upward to 34 and over at $1.12; and in Cameron Meadows and Iowa, Louisiana, below 20°, 72 cents, with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20°, 70 cents, with 2 cents added for each degree upward to 34° and over at $1; and in Black Bayou and White Castle, Louisiana: Below 20°, 80 cents, with 2 cents added for each degree upward to 34° and over at $1.10.

Column 9—Effective September 30, 1933, Texas Co. (On September 29 Texas Co. has posted a schedule of 2 cents on each degree, but changed it on September 30.)

Column 10—Effective September 29, 1933, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 33)

## Crude Oil Prices

### Oklahoma, Kansas, North Central and East Central Texas

East Texas ..... $1.00
Corsicana (heavy) (June 17, 1933)* ..... .80
Other fields..... (See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co., Empire Oil & Refining Co., and Atlas Pipe Line Co. posted 60 cents per barrel in East Texas but on November 3 resumed its posted price of $1 per barrel, making it retroactive to October 22.

*Magnolia Petroleum Co.

### West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933) ..... $ .70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933) ..... .75
Pecos County, Yates shallow Pool (Sept. 29, 1933)* ..... .65
Jones and Fisher Counties*. See gravity table

Note — Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

### Gulf Coast

Grade A and Grade B specification discontinued by leading buyers.
..... (See gravity table)
Tomball (see note)* ..... $1.10
Livingston (Sept. 29, 1933)† ..... 1.00
Cleveland (Jan. 11, 1934) ..... 1.00
Greta (Sept. 29, 1933) ..... .85
Refugio, light..... (See gravity table)
Refugio, heavy (Sept 29, 1933)‡..... .85
Markham and High Island.....
..... (See Gulf Coast gravity table)
Conroe..... (See Conroe gravity table)
Bosco, La. (Jan. 18, 1935)§..... $ .90

Note—Tomball, effective September 29, by Humble Oil & Refining Co. and October 2 by Magnolia Petroleum Co., and November 10 by Stanolind Crude Oil Purchasing Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy by Humble Oil & Refining Co. Cleveland (Liberty County) posted by Magnolia Petroleum Co. §Bosco posted by Pure Oil Co.

### South Central and Southwest Texas

(See note below table)

Darst Creek ..... $ .87
Mirando ..... .80
Luling (Sept. 29, 1933) ..... .75
Pettus ..... 1.05
Salt Flat ..... .87
Lytton Springs (Sept. 29, 1933) ..... .95
Duval County (Sept. 29, 1933)..... .80
Saxet ..... .85

Note—Effective on September 29 by Humble Oil & Refining Co. in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29 by

(Continued on Page 33)

# TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

June 4, 1935

### Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

### Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon or 2 cents a gallon off retail prices is permitted for purchases running between 4,000 and 10,000 gallons a month, or 4 cents a gallon off retail prices for purchase in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

### Standard Oil Co. (Indiana)

| | Gasoline: Tank wagon | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| Chicago | 15 2 | 17.2 | 4.0 | 9.8 |
| Decatur, Ill. | 15 2 | 17.2 | 4.0 | 9.8 |
| E. St. Louis | 14.9 | 16.9 | 4.0 | 9.5 |
| Joliet | 15 2 | 17 2 | 4.0 | 9 8 |
| Peoria | 15 2 | 17.2 | 4.0 | 9.8 |
| Quincy | 15 0 | 17.0 | 4.0 | 9.6 |
| Davenport, Ia. | 15.2 | 17 2 | 4.0 | 9 8 |
| Des Moines | 15.0 | 17.0 | 4.0 | 9.6 |
| Mason City | 15.4 | 17.4 | 4.0 | 10 0 |
| Sioux City | 15 2 | 17.2 | 4.0 | 9.8 |
| Duluth, Minn. | 16.0 | 18.0 | 4.0 | 10.6 |
| Mankato | 15 6 | 17.6 | 4.0 | 10 2 |
| Minneapolis | 15 6 | 17.6 | 4.0 | 10.2 |
| LaCrosse, Wis. | 16 6 | 18 6 | 5.0 | 10.2 |
| Green Bay | 16.9 | 18.9 | 5.0 | 10 5 |
| Milwaukee | 16 5 | 18.5 | 5.0 | 10.1 |
| Madison | 16.6 | 18.6 | 5 0 | 10.2 |
| Detroit, Mich. | 16 7 | 18.7 | 4 0 | 9 3 |
| Grand Rapids | 16 6 | 18.6 | 4 0 | 10 5 |
| Saginaw | 16.8 | 18 8 | 4.0 | 9 3 |
| Evansville, Ind. | 16.9 | 18 9 | 5.0 | 10 3 |
| Indianapolis | 17 1 | 19 1 | 5 0 | 10.5 |
| South Bend | 17.3 | 19 3 | 5.0 | 12.0 |
| Fargo, N. Dak. | 16 6 | 18.6 | 4.0 | 11 2 |
| Huron, S. Dak. | 17.1 | 19.1 | 5.0 | 10.7 |
| Sioux Falls | 16 6 | 18 6 | 5.0 | 10.2 |
| Kans. Ct., Mo.* | 14 6 | 16 6 | 4.0 | 9 2 |
| Springfield | 14 3 | 16.3 | 4.0 | 8.9 |
| St. Louis | 14 9 | 16.9 | 3.5 | 9 5 |
| St. Joseph* | 14 6 | 16 6 | 4.0 | 9.2 |
| Wichita, Kans. | 14 1 | 13 9 | 4.0 | 6.3 |
| Bartlesville, Ok. | 16.0 | 18.0 | 5.0 | 8.8 |

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

Discounts to dealers: Undivided accounts, 1½ cents on premium and regular and 2½ cents on third grade off service station prices; divided accounts one-half cent less than undivided. Where prices are more than 1 cent below normal, the discounts are one-half cent less than above.

### Stanolex Furnace Oil in Chicago

Effective May 28, 1935, f.o.b. Chicago tank wagon prices: Range oil, less than 100 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and more, 7.3 cents. No. 1 (36-40 R. stw. zero), less than 100 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons or more, 7.3 cents; No. 2 (30-34, stw. zero), same prices and quantities as No. 1; No. 3 (22-26, zero), less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. No. 4 (12-16 zero), less than 400 gallons, 7.5 cents; 400 gallons or more, 6.5 cents; viscosity of No. 4, 85 and 100° F.; No. 5, less than 400 gallons, 5½ cents; 400 gallons or more 4½ cents.

### Southern District

STANDARD OIL CO. (KENTUCKY)

| | Gasoline: Tank wagon | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| Atlanta, Ga. | 18 0 | 20.0 | 7.0 | 12.0 |
| Augusta | 19 0 | 20.0 | 7.0 | 13.0 |
| Macon | 19.5 | 21.0 | 7.0 | 13.0 |
| Savannah | 18.5 | 20.5 | 7.0 | 14.0 |
| Birm'ham, Ala. | 21.0 | 23.0 | 8.0 | 10.0 |
| Mobile | 20.0 | 22.0 | 8.0 | 11.0 |
| Montgomery | 22 0 | 24 0 | 8 0 | 15.5 |
| Jackson, Miss. | 19 0 | 21 0 | 7.0 | 11 0 |
| Vicksburg | 19.0 | 21.0 | 7.0 | 14.5 |
| Jack'ville, Fla. | 18.5 | 20 5 | 8.0 | 11.5 |
| Miami | 18.5 | 20.5 | 8.0 | 13.5 |
| Pensacola | 20 0 | 22.0 | 8.0 | 11.5 |
| Tampa | 18.5 | 20 5 | 8 0 | 12 5 |
| Lexington, Ky. | 19.0 | 21 0 | 6.0 | 10.0 |
| Covington | 18.0 | 19.5 | 6.0 | 11.5 |
| Louisville | 18 0 | 20 0 | 6 0 | 10.0 |
| Paducah | 18.0 | 20.0 | 6.0 | 7.0 |

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

### Rocky Mountain District

CONTINENTAL OIL CO.

| | Gasoline: Tank wagon | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| Denver, Colo. | 18 0 | 20.0 | 5 0 | 13.0 |
| Pueblo | 17 0 | 19 0 | 5 0 | 13 0 |
| Grand Junction | 20.5 | 22.5 | 5.0 | 15.0 |
| Casper, Wyo. | 18.5 | 20.5 | 5.0 | 11.5 |
| Cheyenne | 18.5 | 20.5 | 5 0 | 13.0 |
| Butte, Mont. | 22.0 | 24.0 | 5.0 | 17.5 |
| Billings | 20.5 | 22.5 | 6.0 | 16.5 |
| Helena | 22.5 | 24.5 | 6.0 | 17.5 |
| Great Falls | 20.5 | 22.5 | 6.0 | 17.5 |
| Salt Lake, Utah | 21 0 | 23 0 | 5 0 | 16 0 |
| Boise, Idaho | 22.5 | 24.5 | 6.0 | 18.0 |
| Twin Falls | 22.5 | 24.5 | 6 0 | 18 0 |
| Albu'que, N. M. | 20.0 | 22.0 | *6.5 | 13.0 |

*One-half cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

### Southwestern District

MAGNOLIA PETROLEUM CO.

| | Gasoline: Tank wagon | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| Dallas, Tex. | 15.0 | 17.0 | 5.0 | 8.0 |
| Fort Worth | 15.0 | 17.0 | 5.0 | 8 0 |
| Houston | 15 0 | 17 0 | 5.0 | 8.0 |
| San Antonio | 15.0 | 17.0 | 6.0 | 8.0 |
| El Paso | 17.0 | 19.0 | 5.0 | 10.0 |
| Muskogee, Ok. | 16.0 | 18.0 | 5.0 | 8.0 |
| Okla. City | 16.0 | 18.0 | 5 0 | 8 0 |
| Tulsa | 16.0 | 18.0 | 5 0 | 8 0 |
| Ft. Smith, Ark. | 14.5 | 16.5 | 6.0 | 8.5 |
| Little Rock | 17 0 | 20.0 | 7.5 | 8.5 |
| Texarkana | 15.5 | 17.5 | 5.0 | 8.5 |

### Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

| | Gasoline: Tank wagon | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| Atl'tic City, N.J. | 14.0 | 17.5 | 4.0 | 9.0 |
| Newark | 12.2 | 16.8 | 4.0 | 7.5 |
| Annapolis, Md. | 14.5 | 18.1 | 5.0 | 10.0 |
| Baltimore | 14.1 | 17.6 | 5.0 | 8.5 |
| Cumberland | 15.8 | 19 1 | 5.0 | 12.7 |
| Wash'g'n, D. C. | 12.3 | 15.8 | 3.0 | 9.5 |
| Danville, Va. | 16.6 | 20.1 | 6.0 | 12.9 |
| Norfolk | 15.1 | 18.6 | 6.0 | 11.3 |
| Petersburg | 15 8 | 19.3 | 6.0 | 11.4 |
| Richmond | 15 8 | 19.3 | 6.0 | 11.7 |
| Roanoke | 16 8 | 20.3 | 6.0 | 12.9 |
| Charles'n, W.Va. | 15.0 | 18.5 | 5.0 | 12.6 |
| Parkersburg | 14 3 | 17.8 | 5.0 | 11 2 |
| Wheeling | 15.5 | 19.0 | 5.0 | 12.3 |
| Charlotte, N. C. | 16.4 | 21.9 | 7.0 | 13.5 |
| Hickory | 15.7 | 22.2 | 7.0 | 13.7 |
| Mt. Airy | 15.25 | 21.5 | 7.0 | 13.8 |
| Raleigh | 15.2 | 21.7 | 7.0 | 13.3 |
| Salisbury | 16 3 | 18 3 | 7.0 | 13.6 |
| Charleston, S.C. | 16.3 | 19.7 | 7.0 | 11.3 |
| Columbia | 18 0 | 21.5 | 7.0 | 13.2 |
| Spartanburg | 17.05 | 19.3 | 7.0 | 13.5 |

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount is given.

### Nebraska

STANDARD OIL CO. OF NEBRASKA

| | Gasoline: Tank wagon | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| Omaha | 17 6 | 19.6 | 6 0 | 10.1 |
| McCook | 18 3 | 20 3 | 6 0 | 10.8 |
| Norfolk | 18 0 | 20.0 | 6.0 | 10.5 |
| North Platte | 18.4 | 20.4 | 6.0 | 10.9 |
| Scottsbluff | 19.1 | 21.1 | 6.0 | 11.6 |

Note: Discounts to dealers; where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal, resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank wagon deliveries covered only by Standard Commercial Consumers Contract, effective January 1, 1935.

### Central South District

STANDARD OIL CO. OF LOUISIANA

| | Gasoline: Tank wagon | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| N. Orleans, La. | 17 5 | 21 0 | ‡8.0 | †13.0 |
| Baton Rouge | 16 5 | 20.0 | †7 0 | 12.0 |
| Alexandria | 17.5 | 21.0 | †*8 0 | 10.0 |
| Lafayette | 18.0 | 21 5 | ‡*8.0 | 12.0 |
| Lake Charles | 18.0 | 21.5 | †*8.0 | 12.0 |
| Shreveport | 16 0 | 19.5 | †7.0 | 12.0 |
| Knoxville, Tenn. | 20 0 | 23 5 | 8.0 | 13 5 |
| Memphis | 18 0 | 21 5 | 8.0 | 10 5 |
| Chattanooga | 19.5 | 23 0 | 8.0 | 11.0 |
| Nashville | 19 0 | 22 5 | 8.0 | 13.0 |
| Bristol | 17 85 | 20.6 | 8 0 | 14.0 |

*Includes city tax of 1 cent.

‡Includes 2-cent parish tax. †Includes 1-cent parish tax.

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

### Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA.

| | Gasoline: Tank wagon† | Posted retail | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| San Francisco | 16 5 | 18.5 | 4.0 | 11.5 |
| Los Angeles | 16.0 | 18.0 | 4.0 | 10.5 |
| Fresno, Calif. | 16.0 | 18.0 | 4.0 | 12 0 |
| Phoenix, Ariz. | 20.0 | 22 0 | 6.0 | ‡18.0 |
| Reno, Nev. | 18.0 | 20 0 | 5 0 | 13.0 |
| Portland, Ore. | 19.0 | 21.0 | 6.0 | 13.5 |
| Seattle, Wash. | 19.0 | 21.0 | 6.0 | 13.5 |
| Tacoma | 19.0 | 21.0 | 6.0 | 13.5 |
| Spokane | 22.0 | 24.0 | 6 0 | 16.5 |

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

‡Includes 5-cent state tax.

### Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO

| | Gasoline: Tank wagon | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| Phil'delphia, Pa. | 15.0 | 17 0 | 4.0 | 9.0 |
| Pittsburgh | 16 0 | 18 0 | 4.0 | 10.0 |
| Allentown | 15 5 | 17 5 | 4.0 | 10.0 |
| Erie | 15.0 | 17.0 | 4.0 | 9 0 |
| Scranton | 16.0 | 18.0 | 4.0 | 10.0 |
| Altoona | 16.0 | 18 0 | 4.0 | 10.0 |
| Dover, Del. | 15 5 | 17.5 | 4.0 | 10.0 |
| Wilmington | 15 5 | 16 5 | 4.0 | 9.0 |
| Springf'd, Mass. | 13 2 | 16.7 | 4.0 | 7.5 |
| Worcester | 13.3 | 16 8 | 4.0 | 7.5 |
| Hartford, Conn. | 12 3 | 15 8 | 3.0 | 7.5 |
| New Haven | 12.2 | 15.7 | 3.0 | 7.5 |
| Providence, R.I. | 12.0 | 15.5 | 3.0 | 7.0 |

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

### Canada*

Imperial 3-Star Gasoline

IMPERIAL OIL, LTD.

| | Gasoline: Tank wagon | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| Hamilton, Ont. | 22 0 | 25.0 | 6.0 | 17.5 |
| Toronto, Ont. | 22 0 | 25 0 | 6.0 | 17.5 |
| Brandon, Man. | 30 3 | 33.3 | 7.0 | 21 8 |
| Winnipeg, Man. | 28.7 | 31.7 | 7.0 | 20.2 |
| Regina, Sask. | 30.0 | 33.0 | 7.0 | 21.5 |
| Saskatoon, Sask | 32 8 | 35.8 | 7.0 | 24.3 |
| Edmonton, Alta. | 32.2 | 35.2 | 7.0 | 23 7 |
| Calgary, Alta. | 29.5 | 32.5 | 7.0 | 21.0 |
| Vancouver, B.C. | 27.0 | 30.0 | 7.0 | 24.0 |
| Montreal, Que. | 24.0 | 27.0 | 6.0 | 17.0 |
| St. John, N.B. | 26.0 | 30.0 | 8.0 | 19.5 |
| Halifax, N. S. | 26.0 | 30.0 | 8.0 | 19.5 |

*Imperial gallon used in Canada.

Maritime provinces, all dealers 4 cents off service station price. All other provinces open dealers 3 cents per gallon off service station price, 1 cent additional to 100 per cent accounts.

### Naphtha

STANDARD OIL CO (INDIANA)

| | Tank wagon* |
|---|---|
| Oleum spirits | 15.7 |
| V.M.&P. naphtha | 16.0 |
| Cleaners' naphtha | 15.0 |
| Stanisol | 15.0 |

*Prices include 3-cent Illinois tax, but not 1-cent federal tax nor 2 per cent retail occupational tax.

Prices f.o.b. Chicago, March 12, 1935. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

### New York and New England

SOCONY-VACUUM CO., INC

| | Gasoline: Posted dealer | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| Albany, N. Y. | 14.2 | 17.7 | 5.0 | †.5 |
| *Met. New York | 14.55 | 18.3 | 5.0 | †.25 |
| *Br'kl'n, Queens | 14.3 | 17.8 | 5.0 | †.25 |
| Buffalo | 14.7 | 18.2 | 5.0 | 8 4 |
| Rochester | 14.7 | 18.2 | 5.0 | 8 4 |
| Syracuse | 14.5 | 18.0 | 5.0 | 8.5 |
| Boston, Mass. | 13.0 | 16.5 | 4.0 | 7.0 |
| Portland, Me. | 14.5 | 18.0 | 5.0 | 7.5 |
| Manch't'r, N.H. | 14.8 | 18.3 | 5.0 | 8.25 |
| Burlington, Vt. | 16.2 | 19.7 | 5.0 | 8.5 |

*Includes 2 per cent city sales tax.

### Ohio

STANDARD OIL CO. OF OHIO

| | Gasoline: Tank wagon | Service station | Incl'ds tax | Kero. tank wagon |
|---|---|---|---|---|
| Ohio points | 16.5 | 18.5 | 5.0 | *13 5 |

*Includes state tax of 1 cent, effective July 22.

### RETAIL PRICE CHANGES

Standard Oil Co. (Indiana) May 17 advanced tank wagon kerosene 1.2 cents in Grand Rapids; May 28, advanced tank wagon kerosene 1.3 cents in South Bend.

Standard Oil Co. of Louisiana May 21 advanced tank wagon gasoline .75 cent and station gasoline 1.5 cents in Nashville; May 22, advanced tank wagon gasoline .75 cent and station gasoline 1.5 cents in Knoxville and Chattanooga; advanced tank wagon gasoline .25 cent and station gasoline .5 cent in Memphis.

Atlantic Refining Co. May 27 reduced station gasoline 1 cent in Wilmington.

Standard Oil Co. of New Jersey May 29 advanced tank wagon and station gasoline .5 cent in Wheeling.

Standard Oil Co. of California May 31 reduced tank wagon and station gasoline 1 cent in Fresno.

Magnolia Petroleum Co. June 1 advanced tank wagon kerosene one-half cent in Fort Smith, Little Rock and Texarkana.

General Petroleum Corp., effective noon June 4, reduced all grades of gasoline in Los Angeles area 1.5 cents. Other marketers following.

## Unitization Plan in South Burbank Field

The long considered plan to unitize the South Burbank Pool in Osage County, Oklahoma, has culminated in an agreement between all the operators in the pool with two exceptions to put the plan into execution.

The signatories to the agreement are Albec Oil Co., Bay Oil Co., Bridgeport Machine Co., Carter Oil Co., Enterprise Transit Co., Gypsy Oil Co., Indian Territory Illuminating Oil Co., Mabee Consolidated Co., Manahan Oil Co., Midco Oil Corp., Norbla Oil Co., Phillips Petroleum Co., Peters Petroleum Corp., Skelly Oil Co. and H. P. Taubman. The companies that have not signed are the Sinclair Prairie Oil Co. and the Champlin Refining Co.

The plan unitizes all the drilling, producing and royalty interests in the pool of those participating. The basis of evaluating the interests of the participants, that is, their respective interest in the recoverable oil, was calculated on the recovery per acre in the Burbank Field.

The gas produced by the wells in the field will be put back in the Burbank sand, thus maintaining a steady and adequate pressure which is expected to greatly extend the flowing life of the pool and increase the ultimate production of the pool by 20 per cent.

The Carter Oil Co. has been chosen as the operator, and will have full charge of the development under the guidance of an advisory committee.

The unitized plan of operating will require fewer wells, and will give the participants the opportunity of locating the wells on the most advantageous points on the structure instead of spacing them uniformly 660 feet apart.

# NEWS FOR PETROLEUM REFINERS

## Pan American Plans to Double Texas Refinery

The Pan American Petroleum Corp. is planning to erect a second unit at its Texas City, Tex., refinery and in effect will double the crude capacity of the plant. Expansion of the refinery was provided for when it was originally built two years ago and at that time it was generally understood that the plant would be enlarged as soon as general economic conditions warranted.

The refinery is rated at 25,000 bbls. per day and has run more than this at times. The duplication of existing distillation facilities would mean the addition of 25,000 bbls. of crude distillation and cracking facilities. The original refinery included combination units and the construction represented the most modern in all phases of the work. Awaiting actual cost data the company has made no formal announcement.

The company markets a large portion of its products along the East Coast and recently inaugurated barge service for market outlets along the Ohio River.

### MAY HAVE VOLUNTARY CODE

WASHINGTON, D. C., June 1.—What position the oil jobbers of the United States should take towards a voluntary code to govern oil marketing, following the collapse of the NRA, will be discussed at a special meeting of the members of the National Oil Marketers Association here Monday, June 17. The meeting has been called for 10 o'clock on that date in the Chinese Room of the Mayflower Hotel, Washington, D. C.

The recent reduction made by refiners in jobbers margins also will be considered, together with proposed national legislation affecting the oil industry and an amendment to the by-laws of the association.

E. V. Weber, of Cincinnati, Ohio, president of the National Oil Marketers Association, will preside. Paul E. Hadlick, of Washington, D. C., is secretary.

The National Oil Marketers Association is composed of oil jobbers, wholesalers and distributors of petroleum products in approximately 30 states.

### CHAIN STORE TAX

LOS ANGELES, Calif., June 1.—The senate by a vote of 24 to 14 passed the Rich-Hays bill to put to a vote of the people the question of taxing chain stores, which is understood to include filling stations.

This bill would tax chain stores from $1 to $500 per store.

The vote of the people in November, 1936, would be advisory only to the 1937 legislature.

The senate went on record today as being opposed to putting into the constitution an amendment providing that the gasoline tax can be used only for highway.

### MAY MOVE PLANT

Russell County, Kansas, oil producers have been approached by J. R. Travis of Duncan, Okla., who is seeking crude contracts there for 100,000 bbls. monthly. He proposes to move a refinery from Duncan, Okla., to Russell, and operate a 3,500-bbl. skimming plant there. Thus far he has made no arrangement for a site but it is understood Russell is ready to supply one.

### OIL TRADES OUTING

The thirteenth annual sports outing of the Oil Trades Association of New York, Inc., will be held at Pelham Manor, New York City, on Tuesday, June 11.

## Revision of Socony-Vacuum Officers Announced During Annual Meeting

NEW YORK, June 3.—John A. Brown who has been chairman of the executive committee for the Socony-Vacuum Oil Co., Inc., for the past 18 months became the chief executive officer today through action of the stockholders who elected him president of the company. He succeeds Charles E. Arnott, who was elected a vice president. Herbert L. Pratt who has been the titular head of the company as chairman of the board retired after 40 years service under the company's retirement plan. Mr. Arnott has been active in the stabilization work of the industry over the past two years and will continue in that work.

inquiry from a stockholder he expressed the opinion that the Wheeler-Rayburn bill, if passed in its present form will have no effect on the company's operations.

**Brown Widely Known**

Mr. Brown, the company's new president, is widely known in both domestic and foreign oil circles. He entered the oil business in 1911 and later became an executive of Standard of New Jersey subsidiaries operating outside the United States. He was located for several years in the Dutch East Indies and Mexico and was also connected with South American operations.

H. L. PRATT

With the exception of Mr. Pratt all the directors of the company were re-elected at the annual stockholders meeting. The members of the board are: E. R. Brown, John A. Brown, Arthur F. Corwin, Frederick Ewing, Frederick F. Fales, George V. Holton, Charles L. Jones and Harold F. Sheets. Other officers of the company are: Mr. Fales, treasurer; William D. Bickam, secretary and Rodney S. Durkee, controller. The members of the executive committee are: Messrs. Corwin, Fales, Holton, Sheets and John A. Brown, chairman.

The company's operations for the first quarter were in the red but became profitable in April, Mr. Brown told the stockholders, explaining, "we hope that the business situation will permit the continuance of increasing profits the remainder of the year." In reply to an

JOHN A. BROWN

He became connected with Socony-Vacuum in 1928 where he was made a vice-president of the General Petroleum Corp., its large west coast subsidiary. He was elected president of the company in 1930 and headed its operations during an expansion period. He came to New York City in the fall of 1933 to become a member of the board of Socony-Vacuum and chairman of the executive committee.

Mr. Pratt retires after 40 years service with Socony-Vacuum and the Standard Oil Co. of New York, one of the principal companies from which the present Socony-Vacuum company was formed. The son of one of the early pioneers of the oil industry he started to work in one of the company's plants following graduation from Amherst College in 1895.

### NEW TEXAS TERMINAL

The Texas Co. has announced plans for the construction of a tidewater oil terminal to be located at Brownsville, Tex., and company officials stated that work will be started in time to have the project completed with the opening of the Brownsville deep water port.

The terminal will consist of a 50,000-bbl. storage tank, oil tank car tracks, loading facilities and other accommodations for bringing the oil in by boats and distributing it over the lower Rio Grande Valley.

### EXTEND RECEIVERSHIP

Extension of the receivership of Western Oil & Refining Co. for 60 days was ordered at a hearing before Federal Judge McCormick. This extension may be longer, if necessary. Robert C. Gillis is receiver for the company which has been in receivership since April 4, 1931.

The court suggested that steps be taken to work out some plan to provide for paying the State of California delinquent gasoline taxes amounting to approximately $330,000.

## Standard of California to Complete Work July 1

The Standard Oil Co. of California expects to complete on July 1 the refinery construction program at Richmond, started early in the year. In addition to remodeling existing equipment, the company is erecting a new lubricating oil unit. Primary work, which consisted of extending dockage facilities and the laying of several large diameter pipe lines from the dock to the refinery, was completed May 1. The refinery is located at tidewater and hence these lines were only about a mile in length. The wharf has been extended 670 feet to permit greater flexibility of operations as the company is moving crude oil from Estero Bay to Richmond refinery by boat and loading out refined products. In order to further facilitate operations a new 20-inch pipe line has been laid from the wharf to the San Pablo tank farm located about 3 miles from tidewater.

### M. WORTHLEY SECRETARY

Montague Worthley has been appointed secretary of the New York Petroleum Industries Committee, C. C. Benedict, chairman of the committee, has announced. Mr. Worthley replaces J. P. Brophy. Recently, Mr. Worthley was engaged in the campaign of the New York Highway Users Conference in opposing the increase of the state gasoline tax to 4 cents a gallon.

The executive committee of the committee includes: W. L. Day, Jr., Shell Eastern Petroleum Products, Inc.; F. W. Garnjost, Texas Co.; J. M. Woodruff, Sinclair Refining Co., and E. F. McCabe, Tide Water Oil Sales Corp.

The new general committee will include the following: D. M. Bellen, Tide Water Oil Sales Corp.; E. L. Palmer, American Oil Co.; Harold Stone, Atlantic Refining Co.; C. G. Pepoon, Pure Oil Co.; E. C. Biglow, Sun Oil Co.; E. Waldo Emerson, Gulf Refining Co.; W. J. McGraw, Continental Oil Co.; G. P. McDonald, Richfield Oil Corp.; P. J. Kennedy, Crew-Levick Co.; A. M. Talbott, Warner-Quinlan Co.; C. A. Bedford, Colonial Beacon Oil Co.; and J. B. Fisher, Kendall Refining Co.

### HARBOR SERVICE TANKS

LOS ANGELES, Calif., June 1.—The Petrol Corp. and Fletcher Oil Co. were recently granted joint permission by the Board of Harbor Commissioners to erect eight oil tanks in the rear of Berth 163 at Los Angeles harbor and construction work will be started within the next few days. These tanks will be used for the storage of gasoline, Diesel and fuel oil and their installation will permit these companies to make deliveries of small quantities of refined oil for use as bunkers or into small deep tanks of vessels. No plans have yet been made to use existing pipe line facilities of other operators but this will no doubt be done at some time in the future. For the present tank trucks will be used.

### OIL FOR CEMENT PLANTS

A total of 12,300,000 pounds of petroleum oils and greases were used as lubricants in the manufacture of portland cement in this country during 1933 alone, according to the A.P.I. Cement manufacture required the consumption also during 1933 of 1,620,000 bbls. of fuel oil and 22,000,000,000 feet of natural gas. The data are based upon reports of the U. S. Bureau of Mines and of cement manufacture.

## Late Fields

### OKLAHOMA

Magnolia Petroleum Co.'s No. 1 Sharp, C SW SW Section 34-20-2w, in the southern end of the Lucien Pool in Noble County, Oklahoma, had a 198-bbl. production, mostly from Viola lime pay topped at 4,970 feet and first Wilcox sand topped at 5,032-72 feet. Second Wilcox was found at 5,132 feet, but there was no increase in oil. The well is expected to be bottomed at 5,200 feet.

In the Edmond Pool in Oklahoma County, Marathon Oil Co.'s No. 5 Dahl, SW SE SE Section 31-14-3w, flowed 2,476 bbls. in 5 hours and 20 minutes and same company's No. 1 Dahl, NE NE SW Section 31-14-13w, flowed 756 bbls. in four hours and its No. 5 Dahl, C NW NE Section 31, was drilling at 6,353 feet with Viola and Simpson absent and dolomite topped at 6,028 feet. Slick-Urschel, Inc.'s No. 1 Sueneram, NE NW NE Section 6-13-3w, flowed 1,164 bbls. in two hours. Earlier details of these wells are given on page 78.

Phillips Petroleum Co.'s No. 1, SW SE NE Section 34-12-3w, Oklahoma City Field, had Wilcox sand at 6,295-6,462 feet and a 34,000,000-foot gas production, but no oil. It first produced its gas through a 4-inch choke against a 200-pound back pressure, but on Monday produced through casing with no increase in volume, with a 375-pound pressure on the line.

## Illinois and Indiana Petroleum Association

ROBINSON, Ill., June 3.—A petroleum conference of the Illinois-Indiana oil producers was held under the joint sponsorship of the Illinois-Indiana Petroleum Association, Illinois Geological Survey and the Indiana Division of Geology at the Crawford County Country Club, Robinson, Ill., June 1. William Bell, of Robinson, presided as chairman.

The first session held Saturday afternoon dealt with improved recovery methods and the first paper was by A. H. Bell, geologist and head of the Oil and Gas Division, Illinois State Geological Survey, Urbana, Ill., on "Direction of Fluid Movement in Illinois Oil Sands." Frederick Squires, formerly associate petroleum engineer, Illinois State Geological Survey, presented the second paper on "The Drake-Stifle Controlled Water Flood in Crawford County, Illinois."

Other papers by W. V. Howard, associate professor of geology, University of Illinois, Urbana, on "Factors Affecting the Recovery of Oil From Limestone Reservoirs," and "Results of Acid Treatment of Indiana Wells," by J. P. Kerr, state gas supervisor, Indiana Division of Geology, Department of Conservation, Indianapolis, Ind.; "Role of the Stripper Well in the Future Supply of Petroleum," by W. H. Voskuil, mineral economist, Illinois State Geological Survey, and "Down Under in Illinois in Relation to Oil and Gas," by M. M. Leighton, chief, Illinois State Geological Survey, completed the technical session.

In the evening, after a supper at the clubhouse, E. B. Cochran, Lawrenceville, Ind., presided as chairman, and William Bell, president, Illinois-Indiana Petroleum Association and president of the National Stripper Well Association, addressed the meeting on "The Interstate Oil Compact." He was followed by Col. Harold B. Fell, Tulsa, executive vice president, Independent Petroleum Association of America, also executive vice president of National Stripper Well Association, who spoke on "The Economic Situation Affecting Stripper Wells."

The meeting was well attended and the sponsors feel that much was accomplished in the discussions toward outlining methods for the improved recovery of oil; exploration for oil and legislation, control measures and taxation affecting the industry.

## Group 3 Gasoline Market Good in Spite of Rainfall

(Continued from Page 26)

the high-gravity distillates were unable to retain their hold, losing an eighth in the tank car quotations. Ordinarily as the demand for this material for heating purposes slackens in the spring the demand from the farm compensates for it, but here again the weather set plans awry.

The lubricant group was doing a little better, with quotations for some grades of steam-refined stocks up a half cent. The movement of bright stocks and neutrals was reported satisfactory. Wax, too, had a better undertone, though there was no change in quotations on white crude scale. The movement of wax in May, largely export, was heavier than had been looked for.

## Carter Oil Co. Makes Brownfield Chief Scout

Thomas Brownfield has been made chief scout of the Carter Oil Co., succeeding Vance E. Rowe, who resigned to go into business for himself. Mr. Brownfield ranks among the leading oil statisticians in the country. He has been with the Carter Oil Co. eight years, previously having been secretary to Congressman Montgomery in Washington. He attended Oklahoma University and Tulsa University. His work with the Carter Oil Co. has been altogether in the scouting and statistical departments, giving him an excellent groundwork of experience in his new position.

### I. A. ARCHAMBAULT DIES

CHICAGO, June 4.—I. A. Archambault, head of the Pennsylvania Oil Co. of Evanston, Ill., and for several years president of the Illinois Petroleum Marketers Association, died at Evanston Hospital June 3 following an attack of appendicitis from which peritonitis developed. He was widely known in Chicago and middle western oil circles.

### GULF COAST WATER SHIPMENTS FOR APRIL, 1935

Magnolia Petroleum Co.:

| Company, terminal— | Crude— Coastwise | Crude— Export | Refined— Coastwise | Refined— Export | Total |
|---|---|---|---|---|---|
| Atlantic Pipe Line Co.: | | | | | |
| Atreco | 1,290,989.59 | 86,592.48 | 39,496.17 | ..... | 1,417,078.24 |
| Texas City | 318,364.99 | ..... | 5,011.60 | ..... | 323,376.59 |
| Harbor Island | 484,613.23 | ..... | ..... | ..... | 484,613.23 |
| Gulf Refining Co.: | | | | | |
| Port Arthur | 561,475.42 | ..... | 1,856,892.54 | 8,898.82 | 2,427,266.78 |
| Humble Oil & Ref. Co.: | | | | | |
| Baytown | 426,150.03 | 163,024.39 | 2,080,135.89 | 414,833.25 | 3,084,143.47 |
| Harbor Island | 1,368,723.35 | 66,985.61 | ..... | ..... | 1,434,808.96 |
| Texas City | 595,224.67 | ..... | ..... | ..... | 595,224.67 |
| Magnolia Petroleum Co.: | | | | | |
| Beaumont | 843,772.64 | ..... | 1,578,436.47 | ..... | 2,422,209.11 |
| Pure Oil Co.: | | | | | |
| Smiths Bluff | 618,059.00 | ..... | 879,624.00 | ..... | 1,497,683.00 |
| Shell Petroleum Corp.: | | | | | |
| Houston | 100,319.90 | 75,419.44 | 918,226.07 | ..... | 1,093,965.41 |
| Norco | ..... | ..... | 428,662.06 | ..... | 428,662.06 |
| Standard Oil Co. of La.: | | | | | |
| Baton Rouge | 342,538.00 | ..... | 1,161,764.00 | 404,737.00 | 1,910,339.00 |
| Sun Oil Co.: | | | | | |
| Sabine Pass and Sun | 2,089,162.80 | ..... | ..... | ..... | 2,089,162.80 |
| Texas Co.: | | | | | |
| Port Arthur | 1,606,824.00 | 311,647.00 | 1,788,194.00 | 624,809.00 | 3,731,474.00 |
| Miscellaneous: | | | | | |
| Houston | 1,502,079.67 | 179,149.66 | 1,167,389.94 | 136,289.35 | 2,984,908.62 |
| Total April, 1935 | 11,549,597.29 | 881,918.49 | 11,902,832.74 | 1,589,567.42 | 25,924,915.94 |
| Total March, 1935 | 13,048,860.71 | 806,769.39 | 14,272,525.76 | 1,424,953.24 | 29,553,109.10 |
| Difference | 1,499,263.42 | 75,148.10 | 2,369,693.02 | 164,614.18 | 3,628,194.16 |

## Christy Payne Retires From New Jersey Board

(Continued from Page 10)

that such measures are unsound both legally and economically, and that the petroleum industry presents no problem which requires a departure from established constitutional principles or justifies its being singled out for treatment different from that accorded to other great private businesses. We look to our stockholders to support us in our conviction that the public welfare will best be served by the preservation of private ownership and private management, with open competition and the minimum of governmental domination."

Mr. Teagle said it was his belief that the "hot" oil situation was in better control than it had been for some time. He pointed to the large potential production in East Texas and other fields as indicating the need of strict curtailment.

Net profits of the company were $45,618,960, amounting to $1.76 per share of common stock outstanding. This is the largest net earnings since 1929, and compares with $25,084,310 for 1933.

T. C. McCobb, comptroller of the company, was elected a new member of the board, succeeding Christy Payne, who announced his retirement as an officer and director of the company today. It was not announced at the meeting but it is understood that R. P. Reasor, present assistant treasurer, will be elected treasurer, succeeding Mr. Payne. Mr. Reasor has been with the Standard organizations, including the Indiana and New York companies, for a period of 46 years. Mr. McCobb, who is 52 years old, first joined the Standard organization in 1902 with the Atlantic Refining Co. at Franklin, Pa. He was connected with the Imperial Oil, Ltd., starting in 1917, and was secretary and treasurer of the company in 1928 when he joined the Standard of New Jersey as assistant comptroller

Other members of the board of directors re-elected today are F. H. Bedford, Jr., W. S. Farish, R. W. Gallagher, Orville Harden, D. L. Harper, E. J. Sadler, G. H. Smith, C. O. Swain and Mr. Teagle.

The stockholders authorized the directors to end the fifth stock acquisition plan for employes if they deemed it desirable during the year.

Mr. Payne was at the head of all the Standard Oil Co.'s natural gas interests for years, and a member of the board of directors of the Standard Oil Co. (New Jersey). He was born in Butler, Pa., February 27, 1874, graduated from Titusville High School and Princeton University and entered the employ of the National Transit Co. in 1895 as a bookkeeper.

Mr. Payne read law with the late Mortimer F. Elliott, and was admitted to the bar. His first connection with the natural gas business was as secretary and counsel for the Peoples Natural Gas Co. in 1903. He was elected to similar offices for the Hope Natural Gas Co. and allied companies in 1906, and made a director of all the companies. In 1920 Mr. Payne was elected president of the Peoples Natural Gas Co., a position which had been held by his father, the late Calvin N. Payne. In 1926 he was chosen president of the Hope Natural Gas Co. He was elected treasurer of the Standard Oil Co. (New Jersey) in April, 1933, succeeding S. B. Hunt.

### E. J. McGOULDRICK DIES

E. J. McGouldrick, superintendent of the Independent Torpedo Co. in the Panhandle Field, and a half brother of J. K. McGouldrick, president of the Texas Pipe Line Co. of Oklahoma, died Monday at his home in Pampa, Tex. He was 45 years old.

Death was due to effects of having been gassed during the war, aggravated by pneumonia. Mr. McGouldrick was in charge of gas and gasoline plants of the Texas Co. when the United States entered the war and he enlisted from Tulsa. After being convalesced home, Mr. McGouldrick was transferred to the Rocky Mountain territory and then entered the service of the torpedo company. He was head of its Montana and Wyoming work for some years and moved to Pampa in 1934.

## To Sell 3,000,000 Bbls. of Confiscated "Hot" Oil

(Continued from Page 13)

East Texas Refining Co. contracted to recover the oil, pay the expense of recovering it and also pay so much per barrel for all recovered. If tender could not be procured for the oil the company intended to seek relief from its contract to take the oil.

On Tuesday the commission was restrained by Judge D. S. Meredith in Special District Court at Longview from interfering with the movement of the fugitive oil recovered from Glade Creek. The application was granted to John E. Taylor, receiver appointed by Judge Meredith.

The East Texas Refining Co. took the recovery contract on a reverse sliding scale, it was reported. The company pays the State 22½ cents a barrel for the first 100,000 bbls., 17½ cents for the second and 12½ cents for the remainder and in addition must settle with the original owners and pay the receiver.

#### Skimming Plants

A hearing on recovery of skimming plants in the field is to be held by the Railroad Commission on June 5 at Kilgore. Hearings on other plants will be held later. At one hearing several plant operators testified that more than 75 per cent of the oil can be recovered from tank bottoms. A rule permitting tenders on 75 per cent of tank bottoms was set up by the commission on June 29, 1934. This recovery is charged against lease allowables since that rule was set up. Some plant operators maintain the recovery is greater than 75 per cent, or as high as 93 per cent or more. There are now only six reclamation plants operating in the field, where there were around 40 operating prior to the charge-back rule, according to a member of the commission's forces. Tank bottoms cost the plants from 36 to 45 cents per barrel and they in turn sell at 65 to 80 cents per barrel.

Eighteen additional employes have reported for duty with the commission at Kilgore.

#### Runs and Shipments

Runs to refineries in the field showed a daily increase of nearly 8,000 bbls. per day this week over the previous week and refined shipments from the field increased by 419 cars. There were 28 refineries operating in the field, running over 47,900 bbls. per day. Tank car shipments are as follows:

| | Cars | Gallons |
|---|---|---|
| Gasoline | 618 | 5,030,225 |
| Fuel oil | 185 | 1,751,330 |
| Casinghead gasoline | 166 | 1,460,740 |
| Crude oil | 100 | 917,365 |
| Distillate | 84 | 681,720 |
| Kerosene | 56 | 453,745 |
| Gas oil | 35 | 293,450 |
| Topped crude | 12 | 114,270 |
| Residuum | 7 | 56,935 |
| Naphtha | 10 | 80,965 |
| | 1,273 | |

The 100 cars of crude were those involved in the confiscation proceedings, purchased by Master Refining Co. They were moved under forged tenders and the shipment was stopped in transit.

Overproduction this week was estimated to be from 31,000 to 32,000 bbls.

While a house investigating committee began inquiries into oil matters in East Texas, a general senate investigating committee here Tuesday appointed Senator Joe Hill of Henderson chairman of its subcommittee to investigate oil matters, with full power to develop the scope and work of the committee. Mr. Hill said he did not know how soon that phase of inquiry will be undertaken.

# Tank Wagon and Service Station Prices Holding in Chicago Marketing District

By SPECIAL CORRESPONDENT

CHICAGO, June 3.—While the oil trade in this region was caught somewhat off guard by the Supreme Court's decision abrogating codes, actual net effect thus far on ruling prices has not been noticeable. This is despite the fact that there was some hesitancy and nervousness. The general feeling here is that there might have been extensive repercussions, however, in the way of weakened prices had not major refiner buying been continued. As it is, tank car gasoline prices are fractionally higher than when federal government supervision was in effect. At the moment, the feeling here is that this support will continue. Consequently, the undertone remains firm.

Persistent backwardness of the season and excessive rains have kept gasoline consumption from reaching anything like levels which would have been witnessed with normal weather conditions, it is generally agreed. For example, there were rains over the Decoration Day holiday which kept roads nearly deserted in numerous sections. Shipping instructions on contracts following the holiday were fairly good but not up to a normal expectancy.

### Offerings Limited

Even so, no stocks are piling up as yet that are menacing the market situation, so far as can be ascertained here. The offerings are limited to moderate amounts. Much attention is being paid to East Texas, and a little material has been coming out of there in the last few days, but it is in process of being absorbed and does not appear to have injured the market level.

A certain amount of Michigan, Pennsylvania and East Coast gasoline is still reaching the eastern edge of this marketing area, with the result that there is irregularity in Indiana and Michigan. Some in the industry believe that more attention will be required to be paid to the Michigan territory if the state's producing and refining capacity continue to increase.

### Resist Cuts

Nothing resembling general weakness has overtaken tank wagon and service station prices. Major companies seem inclined to resist reports of lower prices and independents also are as yet not putting much credence in them, although a certain amount of nervousness exists over the general situation. The whole central states' marketing trade of course is wondering what will happen. However, it appears there is less unsettlement now than immediately after the court decision was rendered, and considerable encouragement is being voiced. Major companies most active in this region are understood to be adopting a conservative course. As few changes as possible are being made in any phase of operations in order to continue through the current period with as little disturbance as possible.

### All Shades of Opinion

All shades of opinion are being expressed in the marketing trade locally and hereabouts, regarding the present situation, and until some time passes it will be difficult to catch a clear view of a possible consensus. However, at this time, there is much less general disturbance and unsettlement in the market than there was eight months ago. At the moment, attention is centered on the possibility of a further tank wagon and service price advance in a few days on the basis of a firming tank car structure.

### Kerosene, Tractor Fuels

Persistent backwardness of the season is interfering with kerosene and tractor fuels, but there seems some likelihood that at least some of the business in these items which is not being done now will be done later when rains have finally let up to permit farmers to do field

(Continued on Page 37)

## Crude Oil Prices

(Continued from Page 29)

Humble Oil & Refining Co. and Texas Co. Effective September 20 in Salt Flat by Shell Petroleum Corp.

### Rocky Mountain States

| | |
|---|---|
| Iles light (Sept. 29, 1933) | $.95 |
| Iles, heavy (Sept. 29, 1933) | .90 |
| Florence, Colo. (June 17, 1933) | .80 |
| Fort Collins and Wellington, Colo. (June 17) | (See Salt Creek prices) |
| Big Muddy (Sept. 29, 1933) | 1.01 |
| Frannie, light (May 1, 1934) | .70 |
| Frannie, heavy (Sept. 29, 1933) | .62 |
| Salt Creek and LaBarge (Sept. 29, 1933) | |
| See Stanolind Mid-Continent price schedule | |
| Grass Creek, light (Sept. 29, 1933) | 1.18 |
| Grass Creek, heavy (Sept. 29, 1933) | .62 |
| Elk Basin (Sept. 29, 1933) | 1.18 |
| Rock Creek (Sept. 29, 1933) | 1.02 |
| Lance Creek (Dec. 16, 1932) | .92 |
| Hudson (June 2, 1931) | .65 |
| Lost Soldier (Sept. 30, 1933) | .88 |
| Hamilton Dome, all grades (Feb. 16, 1935) | .67 |
| Torchlight (Sept. 29, 1933) | 1.18 |
| Greybull (Sept. 29, 1933) | 1.18 |
| Pondera (Sept. 29, 1933) | 1.25 |
| Sunburst (Sept. 29, 1933) | 1.35 |
| Cat Creek, Montana | 1.07 |
| Hogback (Sept. 29, 1933) | 1.11 |
| Lea County, N. Mex. (Sept. 29, 1933) | .75 |
| Maljamar (Sept. 29, 1933) | .70 |
| Artesia-Jackson (Dec. 1, 1933)* | .75 |

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 28, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co. Pondera, Mont., by Ohio Oil Co. (Stanolind Oil & Gas Co., effective January 1, 1935, posted $1 per barrel in Pondera.)

*Continental Oil Co.

### North Louisiana and Arkansas

| | |
|---|---|
| Smackover, Ark. (all grades) | $.70 |
| Tullos, Urania, La. (Jan. 13, 1934) | .87 |
| Nevada, Ark. (Sept. 29, 1933) | .60 |
| East El Dorado (Sept. 29, 1933) | .70 |
| Converse, La. (Mar. 17, 1934) | 1.03 |
| Elm Grove, La. (Sept. 29, 1933) | .75 |
| Holly, La. (Nov. 17, 1934) | 1.03 |
| Pleasant Hill, La. (Mar. 17, 1934) | 1.03 |
| Zwolle, La. (Mar. 17, 1934) | 1.03 |
| Champagnolle, Ark. (Mar. 17, 1934) | .81 |
| Lisbon, Ark. (Mar. 17, 1934) | 1.03 |
| Stephens, Ark. (Sept. 29, 1933) | .70 |
| Urbana, Ark. (Mar. 17, 1934) | .60 |
| Other fields | (See gravity table) |

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Navada by Standard Oil Co. of Louisiana. Urbana posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co.; Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

### Eastern States

TIDE WATER PIPE CO.
(Effective May 16, 1935)

| | |
|---|---|
| Bradford, Pa. | $2.30 |
| Allegany, N. Y. | 2.30 |

SOUTH PENN OIL CO.
(Effective May 16, 1935)

| | |
|---|---|
| Pennsylvania Grade Oil in National Transit Lines (Bradford Field) | $2.30 |
| Pennsylvania Grade Oil in Southwest Pennsylvania Lines | 1.92 |
| Pennsylvania Grade Oil in Eureka Pipe Line lines | 1.87 |
| Pennsylvania Grade Oil in Buckeye Pipe Line lines | 1.77 |
| Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933) | 1.87 |

PENNZOIL CO.
(Effective May 16, 1935)

| | |
|---|---|
| Pennsylvania Grade Oil in National Transit Lines: | |
| Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.) | $2.17 |
| Group B (Includes Titusville district.) | 2.16 |
| Group C (Includes Turkey and Tidioute districts.) | 2.15 |
| Group D (Includes Bear Creek and Porkey districts.) | 2.14 |
| Group E (Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacey and Kinsua districts. Price depends on length of pipe line haul to plant at Oil City. | 2.11 |

PURE OIL CO.
(Effective May 16, 1935)

| | |
|---|---|
| Cabin Creek, W. Va. | $1.87 |
| Bradford Hollow, W. Va. | 1.87 |
| Kelly Creek, W. Va. | 1.87 |

### Middle Western States

OHIO OIL CO.

| | |
|---|---|
| Lima (Feb. 1, 1935) | $1.15 |
| Illinois (Jan. 5, 1934) | 1.13 |
| Princeton, Ind. (Jan. 5, 1934) | 1.13 |
| Plymouth | Shut in |
| Midland, Mich. (Sept. 30, 1933)* | 1.02 |
| West Branch, Mich. | .86 |
| Oceana, Mich. (Oct. 5, 1933) | .86 |
| Somerset, Ky. (May 20, 1935) | 1.13 |
| Western Kentucky (May 22, 1935) | 1.13 |

*Posted by Pure Oil Co. and Simrall Pipe Line Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted prices. West Branch, Mich., posted by Simrall Pipe Line Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted prices includes premium. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

### Canada

| | |
|---|---|
| Ontario (September 9, 1933): | |
| Petrolia* | $2.10 |
| Oil Springs | 2.17 |
| Turner Valley (May 21, 1934):† | |
| Clear naphtha | $2.55 |
| Discolored naphtha | 2.37 |
| Crude oil, 50 gravity | 2.19 |
| Crude oil, 45 to 49.9 | 2.07 |
| Crude oil, 40 to 44.9 | 1.80 |

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

### Mexico

| | |
|---|---|
| Panuco* | $1.01 |

*F.o.b. ship, based on April transactions and exclusive of production and export taxes and bar dues.

# California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field)

| Gravity— | Long Beach | Seal Beach, Alamitos Heights | Huntington Beach | Inglewood | Playa del Rey | Olinda, Brea Canyon | Athens-Rosecrans | Torrance | Richfield | Whittier, La Habra | Montebello | Santa Fe Springs | La Habra-Coyote | Midway-Sunset, Elk Hills, Buena Vista Hills | Lost Hills | Coalinga | Coyote |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-14.9 | $.65 | $.65 | $.65 | $.65 | $.65 | $.65 | .... | $.65 | $.65 | $.65 | $.65 | .... | $.65 | $.57 | $.57 | $.57 | $.65 |
| 15-15.9 | .65 | .65 | .69 | .69 | .66 | .69 | .... | .66 | .66 | .65 | .65 | .... | .65 | .... | .... | .... | .65 |
| 16-16.9 | .66 | .65 | .72 | .73 | .69 | .73 | .... | .69 | .67 | .68 | .65 | .... | .65 | .... | .... | .... | .65 |
| 17-17.9 | .69 | .65 | .75 | .76 | .73 | .76 | .... | .72 | .70 | .71 | .65 | .... | .68 | .... | .... | .... | .68 |
| 18-18.9 | .72 | .65 | .78 | .80 | .76 | .79 | .... | .75 | .74 | .74 | .65 | .... | .71 | .61 | .61 | .59 | .71 |
| 19-19.9 | .75 | .65 | .81 | .83 | .80 | .82 | .... | .78 | .78 | .78 | .65 | .... | .74 | .64 | .65 | .62 | .74 |
| 20-20.9 | .78 | .68 | .83 | .87 | .83 | .85 | .... | .81 | .82 | .81 | .66 | .... | .78 | .67 | .69 | .65 | .78 |
| 21-21.9 | .81 | .72 | .86 | .90 | .87 | .88 | .... | .83 | .85 | .84 | .69 | $.72 | .81 | .70 | .73 | .68 | .81 |
| 22-22.9 | .84 | .76 | .89 | .94 | .90 | .92 | .... | .85 | .89 | .87 | .72 | .76 | .84 | .73 | .76 | .72 | .84 |
| 23-23.9 | .88 | .81 | .92 | .97 | .94 | .95 | $.83 | .89 | .92 | .90 | .76 | .79 | .87 | .77 | .79 | .75 | .87 |
| 24-24.9 | .91 | .85 | .95 | 1.01 | .97 | .98 | .86 | .92 | .97 | .93 | .80 | .83 | .90 | .81 | .82 | .78 | .90 |
| 25-25.9 | .94 | .89 | .98 | .... | 1.00 | 1.01 | .90 | .95 | 1.00 | .... | .85 | .87 | .93 | .85 | .85 | .81 | .93 |
| 26-26.9 | .97 | .93 | 1.01 | .... | 1.04 | 1.04 | .94 | .98 | 1.04 | .... | .89 | .90 | .96 | .89 | .88 | .... | .96 |
| 27-27.9 | 1.00 | .98 | 1.04 | .... | .... | 1.07 | .97 | .... | 1.08 | .... | .... | .94 | .99 | .93 | .91 | .... | .99 |
| 28-28.9 | 1.03 | 1.02 | 1.07 | .... | .... | 1.10 | 1.01 | .... | 1.11 | .... | .... | .98 | 1.02 | .97 | .94 | .... | 1.02 |
| 29-29.9 | 1.06 | 1.05 | 1.09 | .... | .... | .... | 1.04 | .... | 1.15 | .... | .... | 1.01 | 1.05 | 1.01 | .97 | .... | 1.06 |
| 30-30.9 | 1.09 | 1.10 | 1.13 | .... | .... | .... | 1.08 | .... | .... | .... | .... | 1.05 | 1.09 | 1 05 | 1.00 | .... | 1.09 |
| 31-31.9 | .... | .... | .... | .... | .... | .... | 1.12 | .... | .... | .... | .... | 1.08 | 1.13 | 1.09 | .... | .... | 1.12 |
| 32-32.9 | .... | .... | .... | .... | .... | .... | 1.15 | .... | .... | .... | .... | 1.12 | 1.16 | 1.13 | .... | .... | 1.15 |
| 33-33.9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.16 | 1.18 | 1.17 | .... | .... | 1 18 |
| 34-34.9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.19 | 1.21 | .... | .... | .... | 1.21 |
| 35-35.9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 23 | .... | .... | .... | .... | .... |
| 36-36.9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.26 | .... | .... | .... | .... | .... |
| 37-37.9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.30 | .... | .... | .... | .... | .... |
| 38-38.9 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1.34 | .... | .... | .... | .... | .... |

### Additional Standard Oil Quotations

**Mountain View**—Effective July 3, 1934, the following are the prices of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field: 14 to 19.9 degrees, 57 cents; 20-20.9, 58 cents; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 63 cents; 24-24.9, 66 cents; 25-25.9, 69 cents; 26-26.9, 72 cents; 27-27.9, 75 cents; 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 and above, 93 cents.

**Elwood Terrace**—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.

**Newhall**—14 degrees and over, 57 cents.

**McKittrick and Kern River**—14 degrees and over, 57 cents.

**Wheeler Ridge**—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

**Kettleman Hills**—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon and Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchases, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 36 degrees and over; Coyote Hills, 28 degrees and over; Richfield, 25 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.

IN

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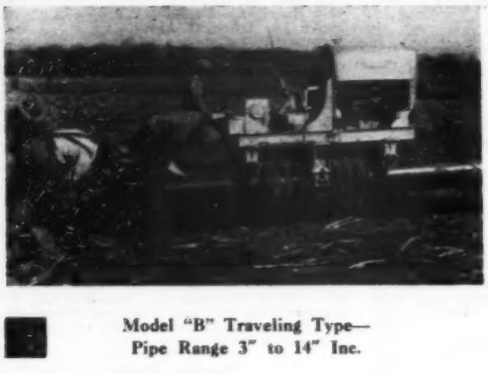
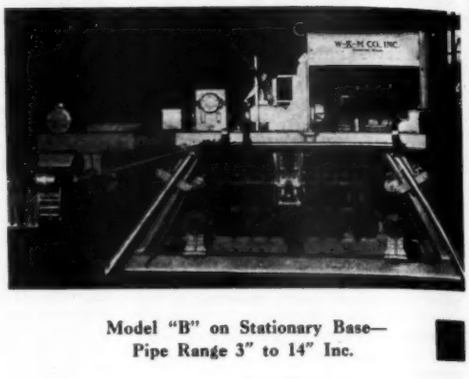
## PIPE-CLEANING MACHINES



Model "B" Traveling Type—
Pipe Range 3" to 14" Inc.



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No other Pipe Cleaning Method cleans pipe as well, economically, as W-K-M cleaning machines.

The cleaning of *new* pipe with these machines, has become quite popular, particularly before the application of protective coatings. The bond or adhesion of coating is much better with clean pipe.

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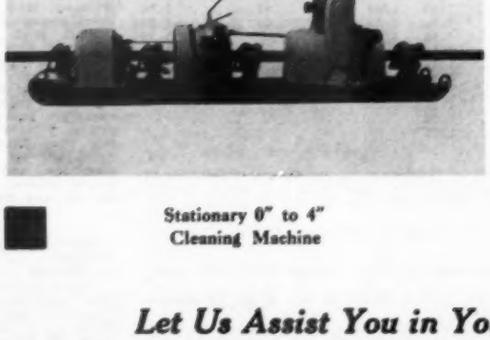
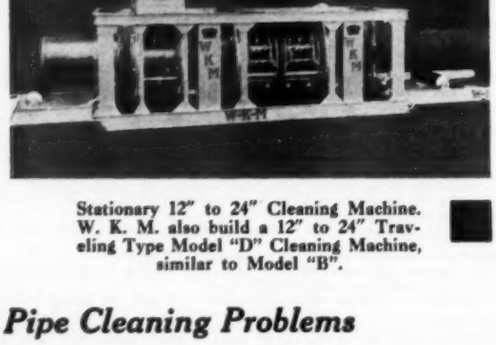


Stationary 0" to 4"
Cleaning Machine



Stationary 12" to 24" Cleaning Machine.
W. K. M. also build a 12" to 24" Traveling Type Model "D" Cleaning Machine, similar to Model "B".

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**CRUTCHER-ROLFS-CUMMINGS-INC.**

*Specializing in*

**PIPE LINE EQUIPMENT AND MATERIALS**

HOUSTON, TEXAS U. S. A.

# Improvements in Gas Transmission and Compression of Natural Gas

By A. L. FORBES, Jr.
General Superintendent, El Paso Natural Gas Co.*

This paper was prepared with the idea of relating some of the experiences encountered in operating a certain high-pressure natural gas transmission pipe line system.

This certain system consists of a total of 715 miles of main lines, composed of 218 miles of 16-inch; 224 miles of 12¾-inch; 233 miles of 10¾-inch; 40 miles of 8⅝-inch, and 53 miles of 6⅝-inch and 4½-inch branch lines. The maximum working pressures of the various lines are as follows: 16-inch, 450 pounds per square inch; 12¾-inch, 650 pounds per square inch; 10¾-inch, 650 pounds per square inch; 8⅝- 6⅝- and 4½-inch, 500 pounds per square inch. The system is an interstate as well as an international one as its lines are laid in the States of Texas, New Mexico and Arizona and in the State of Sonora, Republic of Mexico.

The only source of supply is from the Lea County, New Mexico, gas field which is 650 miles from its furthermost point of consumption. The system has two compressor stations on its 16-inch main line, each station having a total of 2,280 horsepower and two compressor stations on its 12¾-inch line, one station having 2,280 horsepower and the other 1,520 horsepower. Upon the completion of the system, each of the various size lines were tested to the above maximum working pressures. The 16-inch line has been operated at its maximum working pressure and the 12¾-inch line has been operated at 600 pounds per square inch.

The gas in the Lea County, New Mexico, field, from which this company receives its gas requirements, contains approximately 300 grains of hydrogen sulphide per 100 feet and cleaning this gas furnishes this company with most of its operating problems.

### Purification Plants

The sour gas is purified in two purification or treating plants. These treating plants are similar in construction and each consists of two sets of scrubbing towers which were developed by this company and in which a solution of soda ash and water comes into intimate contact with the sour gas under a pressure of 450 pounds. The two sets of scrubbers are operated in series; the first set acting as a stripping plant and the latter as the final cleaning plant.

After the soda ash solution has absorbed the hydrogen sulphide in the gas, it is reactivated either by aeration or heat and is then picked up with pumps and re-circulated in a continuous cycle, the gas passing from the stripping plant into the finishing plant where it comes into contact with the freshly reactivated solution and thence into the main line. By operating the scrubbing towers in series in the above manner, a more consistent result in purification can be obtained. Results of hourly tests made on the purified gas indicate the presence of approximately three grains of hydrogen sulphide, mercaptans and other sulphur compounds per 100 feet. However, more elaborate tests are run periodically in this company's field laboratory, the results of which show that no hydrogen sulphide is present until the results of the hourly field tests exceed six grains per 100 feet. These mercaptans and other sulphur compounds furnish a distinct odor to the purified gas which is very helpful in detecting leaks in the main line as well as in domestic consumer's premises. Unusually high depreciation in the lines used to circulate the soda ash solution is experienced, chiefly on account of the presence of oxygen in the solution which it has picked up during its repeated aeration.

### Average Life of Lines

The average life of these lines is three years. However, in those instances where heat instead of aeration has been used to reactivate the soda ash solution, no unusually rapid depreciation has been observed and this company has found that by using heat to reactivate the soda ash solution, similar results in purification were obtained with approximately 60 per cent less soda ash solution than is required where aeration is used in reactivating the solution. Also, this method appreciatively decreases maintenance costs on pumps, circulating lines and other equipment.

High winds which prevail in this territory during the spring months blow large amounts of soda ash solution from the aerating towers and in the winter months it is necessary to use steam in the towers to prevent the solution from freezing on its way down the aerating towers.

The sour gas often brings oil over with it into the treating towers and causes considerable trouble and additional expense. The oil thus brought over emulsifies with the soda ash solution and causes foaming in the chamber where the gas is separated from the solution. Considerable gas is lost and fresh soda ash must be added when this occurs. The oil finally works itself into the aerating tower basin where it is skimmed off.

There are numerous other problems encountered in operating these treating plants at this pressure, but to discuss them all would require too much time. This past winter the maximum amount of gas treated in one day was 47,000,000 feet and it might be of interest to know that no internal corrosion has been noted in the main line although numerous inspections at various points have been made.

The gas, as it enters the main lines from the gas field, is saturated by virtue of the treating process to which it has been subjected. The gas as it comes from the field is compressed from 250 pounds to 450 pounds at a point approximately 80 miles from the field and compressed once more from 250 pounds to 600 pounds at the El Paso compressor station which is approximately 220 miles from the field. This past winter considerable trouble has been experienced with the freezing of the line at a point 30 to 40 miles west of the El Paso compressor station, but no freezing has occurred in the pipe line from the field to El Paso. The cause of the freezing at this point has not been definitely determined, but this company is working on the theory that the compression up to 600 pounds at El Paso has brought about this condition. Temporary relief has been effected by installing a main line drip approximately 10 miles from the point of freezing, towards the El Paso compressor station.

### Measurement Problem

The measurement department was confronted with an interesting problem when they attempted to make the results from a recording type calorimeter check with those obtained from a Junkers type calorimeter. The recording calorimeter consistently recorded the gas as containing from 1,085 B.t.u. to 1,090 B.t.u., while the best results the most careful operators could obtain on the Junkers type calorimeter varied from 1,040 B.t.u. to 1,070 B.t.u. These results seemed to vary with the time of day at which they were taken.

The manufacturer of the recording calorimeter was appealed to and after the failure of several of their factory representatives to obtain a check between the two instruments, they sent a man from their research department. After innumerable test runs it was decided to effect as near as possible the ideal conditions for running calorimeter tests, thereby eliminating as far as possible the correction factors applicable, as shown in the United States Bureau of Standards tables.

As the average relative humidity in El Paso, Texas, during the summer months is around 12 per cent, it was necessary to spray water in the room in which the tests were being conducted until a relative humidity of 80 to 85 per cent was reached. Having the other conditions right, tests were continued and results obtained checked very closely with the recording type instrument. A humidifier was then developed whereby the air passing to the burner in the Junkers type calorimeter was held at 80 to 85 per cent humidity, thereby eliminating the most serious of the correction factors. These humidifiers are now in use over this company's entire system and results obtained from four company operated calorimeters and four instruments operated by industrial consumers do not vary over 5 B.t.u. in their monthly average.

### Exporting Gas

In connection with exporting gas into the Republic of Mexico, gas is measured and sold under the metric system. An orifice type meter is installed on the Mexican side of the boundary line for the purpose of paying import duty on such gas sold in Mexico. This meter must be read each morning by a representative of the company in conjunction with a Mexican customs officer and duty is paid each day on the amount of gas passed into Mexico the previous day. This company has attempted to have the Mexican Government permit us to post a bond of sufficient amount to eliminate this expensive practice, but to date has been unsuccessful.

The dispatching of gas is handled at the company's El Paso City Gate Station and presents many problems as the furthermost consumer is 650 miles from the gas field, which, under normal operating conditions, requires four and a half days for gas to reach such point from the field. Upon completion of the 10¾-inch pipe line to Tucson and Phoenix, Arizona, the dispatchers noticed a discrepancy in pressures which they received from Douglas, Tucson and Phoenix. Tucson, 108 miles northwest of Douglas, reported more pressure than Douglas. Phoenix, 112 miles farther northwest than Tucson, reported a higher pressure than Tucson. Pressure gauges were checked, but the reports continued the same. The reason for such occurrence was finally attributed to the difference in elevation between the various points.

The elevation at Douglas is 3,930 feet above sea level; Tucson is 2,423 feet above sea level or 1,507 feet lower than Douglas and Phoenix is 1,108 feet above sea level or 1,315 feet lower than Tucson. During the days of very low consumption the pressures recorded were as much as 26 pounds different from the theoretical pressures as figured from Weymouth flow formula, but would check within a pound or two when a correction factor was applied amounting to the weight of a column of gas whose height was equal to the difference in elevation between the two points under the average pressure in the line.

### Cooling Water Problems

The greatest problem in operating this company's compressor stations is in connection with its cooling water. As the main line runs through desert country, a scarcity of water is not an unusual occurrence. However, with one exception, water in sufficient quantities was located and analysis of such showed that it was suitable for use in an open system. Zeolite treating plants of sufficient size were installed to provide ample make-up under ordinary conditions. However, these plants have proved too small, due to the unusual climatic conditions which prevail. During an actual test recently conducted under average operating conditions, with only one 760-horsepower engine operating, the loss during a 12-hour run amounted to 7,471 gallons and the permanent hardness of the water built up from 4 grains to 5.5 grains. During the days of high winds the loss during a 24-hour period has amounted to 125 per cent of the amount in the system. This company now contemplates the installation of closed systems at all of its compressor stations.

After their completion, these compressor stations were run only periodically and numerous dark stains and some pitting was noticed on the piston rods after each shut down. This staining occurred where the piston rod came to rest on the packing while the engine was down and was probably caused by the wet exhaust gases remaining in the cylinder. This condition has been remedied by shutting off the water to the exhaust before the engine is shut down and afterward, turning the engine over with compressed air a sufficient number of times to clean itself and the lines of all exhaust gases.

### Sand Storm Hoods

Because of the numerous sand storms in this area during the spring months, it has been necessary to install dustproof hoods to cover the piston rods on each of the engines. These hoods have so far operated very satisfactorily and have afforded excellent protection to the rods.

Because of the isolated location of the main lines in respect to towns or even ranch houses, the pipe lines are inspected by three line riders who cover the entire distance in automobiles over a road built adjacent to the pipe lines for that purpose. These roads are of utmost importance in time of main line trouble as they provide the only means of access to the line. The main line in its entirety is subjected to severe floods during the rainy season and maintenance of both the pipe line and the road is heavy after each season.

In recounting the above experiences, the writer has attempted to mention only those which he has found peculiar to this particular gas transmission system as compared to other properties which he has operated and trusts that the few points mentioned, with the corrective measures applied, may prove of interest to operators of transmission systems in similar areas.

*Before Natural Gas Department, A.G.A. Memphis, Tenn.

# NATURAL GASOLINE MANUFACTURE

## New Officers Elected by California Association

T. L. Taggart, of the Standard Gasoline Co., was elected president of the California Natural Gasoline Association in an election held June 4 and H. R. Linhoff of the Richfield Oil Co. was chosen vice president. The election also included the choice of 19 directors, the directorate being chosen to serve for a period of two years, while the officers were elected for a period of but one year. The directors for the 1935-1937 term of office include

T. L. TAGGART

H. L. Eggleston of the Gilmore Gasoline Co., L. L. Aubert of the Norwalk Co., A. H. Bradford of West Coast Refining Co., F. E. Davie of Shell Oil Co., R. W. Heath of Signal Oil & Gas Co., E. J. Lange of the Associated Oil Co., H. E. Moulton of C.C.M.O., R. S. Tulin of Shell, T. K. M. Smith of Industrial F., John Rogers of Ingersoll-Rand, R. C. Wheeler of General Petroleum, A. H.

(Continued on Next Page)

## Mohawk Oil Co. Installs Compressors at Mountain View Gasoline Plant

The Mohawk Oil Co. has just completed installing three compressor units at its Mountain View absorption plant in order to increase the intake of wet gas and at the same time increase the recovery of natural gasoline. The company recently purchased two Ingersoll-Rand compressors and two Superior gas engines from the North American Oil Corp, which has shut down its compressor plant at Taft in the Midway-Sunset Field of Kern County and these were installed and have just been put in operation at the Mohawk plant at Mountain View. This installation consists of two Superior engines of 90 horsepower each driving two 19"x20" direct connected Ingersoll-Rand type ER gas cylinders. It is a typical hook-up, which consists of taking wet gas from the field gathering lines to a scrubber and then into the compressor cylinders and finally to the service lines. During the process, the wet gas is introduced into the top of the compressor cylinders, goes out the bottom and thence to the cooler and finally to the absorption towers. The outfit is a conventional type of installation but is particularly significant because it indicates the probability that additional auxiliary equipment will be required within the next several months in order to increase operating efficiency. The suction pressure from the gathering lines is approximately atmospheric whereas the discharge and absorption pressure runs from 30 to 40 pounds. In addition to the installation of two Ingersoll-Rand compressors direct driven by Superior gas engines, the Mohawk Oil Co. has installed a Gardner-Denver duplex two stage horizontal compressor which is actuated by steam.

### Mountain View Gas

The Mountain View Field of Kern County, California, has not proven the bonanza to natural gasoline plant operators that might normally be expected in a field that has over 60 producing wells. The natural gas is not overly wet and while the gas is sufficiently saturated enough to justify processing the volume and well pressures are considerably lower than desirable. This field is of secondary importance and consequently crude oil and natural gas production is far below original expectations. This is of primary importance because it tends to indicate that a number of operators in the field will do well to even recover sufficient revenue to pay out on their capital investment let alone show any profit from operations. The Union Oil Co., which did not pay exorbitant bonuses for acreage located immediately adjacent to the discovery well, should show small but normal profits. The Union has several hundred acres in the extreme west end of the field which may or may not prove as productive as appears at present. Consequently the company's degree of profit depends upon how much of this acreage comes up to expectations.

### Three Gasoline Plants

There are three natural gasoline plants in the Mountain View Field having a rated capacity of 30,000,000 feet per day. A check indicates, however, that they are only operating at approximately 35 per cent of capacity. During the month of March, 1935, these three plants handled 316,898,000 feet of wet gas and recovered 429,038 gallons of natural gasoline. This represents an average recovery of approximately 1.3 gallons of casinghead to each 1,000 feet of natural gas processed. Two of the three plants operating in this field, Standard Gasoline Co. and Mohawk Oil Co. installations have individual rated capacities of 5,000,000 feet of wet gas each per day while the other, Lomita Gasoline Co.'s plant, is rated at 20,000,000 feet per day. The Mohawk Oil Co. dismantled its natural gasoline plant in the Playa Del Rey Field of Los Angeles Basin shortly after the Mountain View Field was discovered and moved it up into the latter area. The Lomita Gasoline Co.'s plant also has some salvaged equipment although the cooling tower and certain other parts are new.

## California Stocks Show Decrease During April

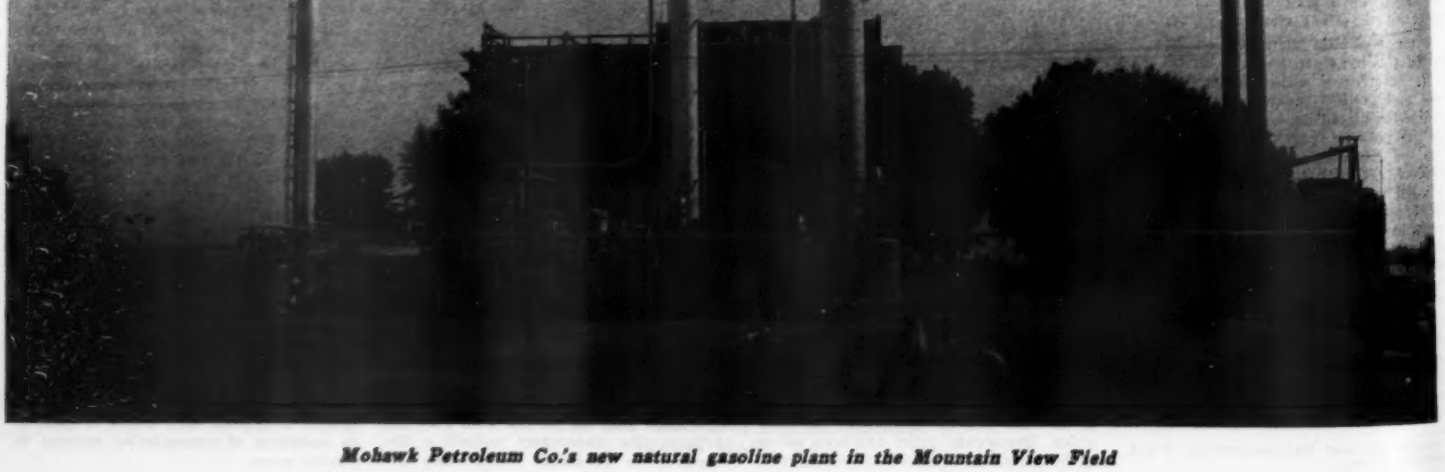
Natural gasoline stocks in California were reduced about 370,000 gallons in April according to the Los Angeles office of the Bureau of Mines. The detailed report follows:

**NATURAL GASOLINE, INCLUDING LIQUEFIED GASES**

| Supply— | April | March |
|---|---|---|
| Total production | 35,109 | 32,015 |
| Stock transfer (deliveries) receipts—net | (79) | (262) |
| Net total | 35,030 | 31,753 |
| Deduct refinery requirements: | | |
| Runs to stills | 1,483 | 1,687 |
| Blended | 21,853 | 24,441 |
| Total | 23,336 | 26,128 |
| Add refinery output: | | |
| Natural gasoline—net | 109 | 186 |
| Net current supply | 11,803 | 5,811 |
| Demand— | | |
| Domestic demand including bunkers | 1,224 | 1,614 |
| Shipments to Alaska and Hawaii | 5 | 5 |
| Rail and truck shipments to U. S. points outside Pacific Coast territory | 3 | 4 |
| Demand in domestic market area | 1,235 | 1,623 |
| Shipments: Pacific foreign inc. Canal Zone | 1,787 | 1,991 |
| Shipments: Atlantic foreign | 0 | 194 |
| Total market demand | 3,022 | 3,808 |
| Losses (gains) unaccounted for—net | 2,001 | 1,811 |
| Total current demand | 5,023 | 5,619 |
| Surplus or (deficit) | 6,780 | 192 |

**NATURAL GASOLINE PLANT OPERATIONS**

| Field— | Gas treated (thou. cu. ft.) | Natural gasoline produced (gallons) |
|---|---|---|
| San Joaquin Valley: | | |
| Elk Hills | 63,888 | 106,215 |
| Kettleman Hills | 9,501,362 | 11,506,217 |
| Midway-Sunset | 1,180,746 | 2,347,017 |
| Mountain View | 226,379 | 298,298 |
| Miscellaneous | 378,060 | 481,331 |
| Coastal Region: | | |
| Elwood | 175,363 | 361,147 |
| Rincon | 61,410 | 67,447 |
| Santa Maria | 117,183 | 279,737 |
| Ventura Avenue | 2,674,012 | 3,066,392 |
| Miscellaneous | 246,977 | 275,040 |
| Los Angeles Basin: | | |
| Coyote | 505,248 | 871,616 |
| Dominguez | 851,882 | 1,452,850 |
| Huntington Beach | 2,028,913 | 3,140,582 |
| Inglewood | 120,994 | 178,324 |
| Long Beach | 1,943,440 | 6,396,551 |
| Playa del Rey | 369,991 | 908,853 |
| Richfield | 406,634 | 673,846 |
| Rosecrans | 509,824 | 660,550 |
| Santa Fe Springs | 2,699,189 | 4,562,904 |



*Mohawk Petroleum Co.'s new natural gasoline plant in the Mountain View Field*

| | | |
|---|---|---|
| Seal Beach | 419,045 | 528,859 |
| Torrance | 101,886 | 218,720 |
| Miscellaneous | 259,387 | 301,950 |
| Total (all fields) | 24,881,913 | 39,219,547 |

**DISTRIBUTION**

| | Gallons | Gallons |
|---|---|---|
| Stocks beginning month | 2,676,486 | ..... |
| Production dur'g month | 39,219,547 | ..... |
| Delivered to refineries | ..... | 38,443,543 |
| Delivered to jobbers, brokers or blenders | ..... | 1,083,896 |
| Blended at plants for production of motor fuel | ..... | 5,218 |
| Losses | ..... | 61,913 |
| Stocks end of month | ..... | 3,301,463 |
| Totals | 42,896,033 | 42,896,033 |

Liquefied petroleum gas production 1,118,880 gals.— 26,640 bbls.
Motor fuel produced ..... 5,531 gals.— 132 bbls.

## New Officers Elected by California Association

(Continued from Preceding Page)

Bell of Continental Oil, J. C. Burks of Field Gasoline, R. D. Gibbs of Union Oil, W. Keck, Jr., of Superior Oil, A. E. Schlitz of Del Rey, W. D. Smith of Wilshire, W. M. Young of Texas Co., and P. E. Fluor of Fluor Construction Co.

The association is essentially a technical organization and has been successful in standardizing methods of test, correlating operating practices to place them upon a uniform and more efficient basis and the association has also promoted fellowship among the natural gasoline fraternity on the Pacific Coast.

The election of new officers relieves H. L. Eggleston, past president of the organization, of that work but he promises to continue to be an untiring worker in the association.

## Tank Wagon and Station Prices Are Holding Up

(Continued from Page 33)

work. Some corn is expected to be replanted. There has been a little easing in kerosene, due to a few more offerings, partly from East Texas. Prices as yet are not being greatly affected but it is thought it may be necessary for the stabilization work to embrace these products more closely than in the past. Stocks are still not very large.

### Heating Oils

Some confusion and divergence of opinion is being encountered on various grades of domestic heating oils, especially the Nos. 1 and 2. A little consumer buying is still necessary due to late chilly mornings and evenings. Aside from this, the peculiar relationship between tractor fuel and furnace oil price structures is causing some discord among various marketing groups. The heating oil contract season for next year is starting, and the various distributors in this region are already out with the start of their solicitation campaigns. Current prices are such that there is some hesitancy among considerers in signing up, it is reported.

### Industrial Oils

Industrial fuels and gas oils continue quiet and featureless, and there is considerable uncertainty about the industrial oil demand in the near future. The tone is easier.

### Lubricants

Lubricants are giving a trifle better account of themselves here, but there is still a disposition to hang back. Jobbers and compounders continue reticent to place orders.

### Wax

Wax is slow, although the tone in this product is a little better than in the recent past.

### Naphthas

A few sellers have advanced their naphtha and solvent prices, and the tone is quite good on all these products, with most of the other sellers indicating likelihood they too may soon advance.

### Coke

Coke is seasonally quiet, prices unchanged.

## Steam Refined Stocks and Gasoline Price Up

(Continued from Page 27)

ered strong. The domestic demand for wax has improved but there are few inquiries in the export market.

The Standard Oil Co. of New Jersey effective June 1 made the following tank car prices effective (cents per gallon):

| Product— | New York | Baltimore | Philadelphia |
|---|---|---|---|
| Esoheat, light (No. 1) | *5.00 | 5.50 | 5.50 |
| Esoheat, medium (No. 2) | *4.00 | 4.00 | 4.00 |
| Esoheat, heavy (No. 4) | *4.00 | 4.00 | .... |
| Oil fuel (No. 4) | .... | .... | 4.00 |
| Oil fuel (No. 2) | .... | .... | 4.00 |
| Standard Diesel fuel, shore plants* | 4.00 | 4.00 | 4.00 |
| Standard distillate fuel | 4.00 | 4.00 | 4.00 |
| Standard gas oil | 4.00 | 4.00 | .... |
| Standard industrial fuel | 3.75 | 3.75 | 3.75 |

*One-eighth cent less for barge loading.

## High Tax Is Temptation To Defraud the Public

WASHINGTON, D. C., June 6.—Disproportionately high gasoline taxes were pictured before the twenty-fifth National Conference on Weights and Measures here as a moral hazard which creates a temptation to cheat the public through short measurement or through tax evasion.

Regardless of the honesty and accuracy of gasoline-dispensing equipment, it may be operated by persons tempted to use it dishonestly, it was said by D. V. Stroop, of New York City, staff engineer of the American Petroleum Institute.

"This temptation," he asserted, "undoubtedly can be fostered by high taxes on gasoline where a seller may greatly increase his profit by short-measuring his customers. In fact, the imposition of disproportionately high taxes on gasoline creates an unhealthy moral temptation for personal gain through either tax evasion or short delivery."

To protect the consumer, Mr. Stroop said, sealers of weights and measures demand the use of fool and fraud-proof pumps, yet the volume of business done by the average service station is so small as to justify only minimum expenditures for such purposes. He revealed that the average service station has a potential gasoline market of only 165 gallons a day. That the average gasoline pump delivers only about 55 gallons per day, explains, he said, why a motorist seldom experiences delay.

Mr. Stroop suggested that Conference and Institute co-operate in drafting adequate yet reasonable specifications of tolerances for measuring devices. "We are both," he said, "endeavoring to accomplish the same result—a square deal to the public, and satisfied customers. By working together we should be able to accomplish the desired result more quickly and easily."

## Vance Rowe Embarks in Private Business

Vance E. Rowe has resigned as chief scout for the Carter Oil Co. to engage in private oil field statistical and engineering work. He will maintain an office in the Midco Buildng in Tulsa. Mr. Rowe had been with the Carter Oil Co. 18 years. He began active work in the oil business in the Mid-Continent in 1907 with the Prairie Oil & Gas Co. and later joined the Gypsy Oil Co. in its scouting department. He joined the Carter Oil Co. in 1917 and represented that company as scout in the Rocky Mountain area during the busiest days of the Wyoming and Montana oil fields. Four years ago he was transferred to Tulsa as assistant chief scout, which position he held until his advancement to chief scout. Mr. Rowe is a graduate of Lake Forest Academy in Illinois. He has a wide experience in oil and is an excellent and painstaking statistician.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# New Field Found in Southern McMullen County; Good Well From Sand in Plymouth Area

SAN ANTONIO, Tex., June 3.—The discovery of a field in the extreme southern part of McMullen County, a possible new field for Duval County and the completion of a large well from a new sand in the Plymouth Field, San Patricio County, made the past week most interesting for the Southwest Texas district.

Texio Oil Co.'s No. 1 Atkinson, a wildcat in the Martha J. Deen Survey, Section 13, McMullen County, was completed in the Government Wells sand, cored last week from 2,195-2,207 feet, total depth, and started flowing by heads, making an estimated 10 bbls. per hour. On the last gauge available production had increased to a steady flow and through a one-fourth inch choke was making 15 bbls. per hour, with gas pressure at 240 pounds, reported increasing at the rate of 10 pounds per hour. The oil is 23 gravity.

The field has been named the Loma Alto Field. It is about 4 miles north of the Seven Sisters Field opened a few weeks ago in Duval County. It is the general opinion the well is producing from the same sand as the discovery well of the Seven Sisters Field, producing just below 2,200 feet.

The test is on "farmed" out acreage, formerly held by Humble Oil & Refining Co., and much of the acreage is cut up into small tracts, which will no doubt cause an immediate drilling campaign. Humble Oil & Refining Co. owns leases to the west of the discovery, while Goldston and Darby Petroleum Co. own leases to the south and southwest.

Another important development along the Government Wells trend was the showing made by Santa Clara Oil Co.'s No. 1 Wood-Welder, approximately 1 mile south of the Seven Sisters Field in Duval County, which cored sand from 2,473-81 feet, total depth, and on a five-minute drill stem test from 2,473-77 feet tested 315 pounds of pressure and 10 feet of oil mud. A second drill stem test was from 2,475-81 feet and the well showed 40 pounds of pressure and recovered 1,350 feet of pipe line oil, through a one-quarter inch choke on top and bottom. Casing is being run and the well will probably be tested later in the week.

While the test is only a mile south of production it is looked upon as a new field, as the upper Government Wells sand, which produces in the Seven Sisters Field, tested dry on a drill stem test at 2,175 feet, and the well was carried to the lower Government Wells sand. The well is about 4 miles east of the Eagle Hill Field and 6 miles northeast of the Government Wells Field in the J. Potivent Survey in Section 385.

### Loma Novia

In the extreme southwestern part of the Loma Novia Field, another short extension is indicated by the showing made by Frank Gravis' No. 1 Byland, which made a drill stem test in sand from 2,578-88 feet, and tested 16 thribbles of oil and 50 pounds of pressure. Casing is being cemented at top of sand preparatory to testing. It is west of Hamil and Smith's No. 1 Hubbard producer in Section 78, Block 4.

### San Patricio County

Three-quarters of a mile southwest of the discovery well in the Plymouth Field, San Patricio County, Heep Oil Co.'s No. 1-E E. H. Welder in the Robert Montgomery Survey, was washed in from a total depth of 5,670 feet and started flowing by heads an estimated 25 bbls. of oil per hour through a one-fourth inch choke, with tubing pressure 900 pounds. The oil is 34.2 gravity. Seven-inch casing was cemented last week at 5,670 feet and production was obtained by perforating the casing with 10 holes from 5,659-63 feet.

The completion opens a deeper sand for this field, opened a few weeks ago by Plymouth Oil Co. Its total depth is approximating 172 feet deeper than the discovery completed at 5,508 feet. Two wells being drilled by Plymouth Oil Co. have reached the pay and will probably run casing to test during the week. No. 2-C Welder, about 1,320 feet east of the discovery, cored sand from 5,621-24 feet, which carried a good showing of oil and the operators were preparing to make a drill stem test. North of the discovery No. 3 Welder cored broken sand and shale showing oil from 5,486-93 feet, and oil sand from 5,493-96 feet that tested 155 pounds of pressure and 100 feet of free oil, with 200 feet of drilling mud. The test was made through a one-quarter inch choke on bottom and a five-tenth inch choke on top.

### Webb County

In the extension area of the Bruni Townsite area of the West Cole Field, Webb County, Magnolia Petroleum Co.'s No. 1-B Benavides was completed at 2,790 feet, flowing 150 bbls. of oil per day after it had cored sand from 2,778-90 feet. This is the second producer for the new area.

### Hidalgo County

Morton and Downey's No. 1 Daskam, northeast of the Sam Fordyce Field in Hidalgo County, is scheduled to be tested over the week-end. Bottomed at 4,114 feet and with 7-inch casing cemented at 4,090 feet, the operators were preparing to drill the plug to test.

### Guadalupe County

In Guadalupe County, John W. Choate has made a tentative location on the Wells ranch in the southeastern part of the county, several miles south of the Darst Creek Field.

### Live Oak County

Along the "Jackson trend" in Live Oak County, Henderson and Coquat's No. 1 Rex, a wildcat 5 miles northeast of the McNeil Field, is drilling below 5,200 feet. In the southwest part of the county, Feltner and others' No. 1 Carter is shut down at 1,800 feet. It is reported that as soon as the test is completed the rig will be moved to a location of the Lyne ranch, southwest of the town of George West.

In the same county, but in the Dinero Field, Smith and Story's No. 1 Dinero Townsite was still testing late in the week at 5,216 feet, total depth. Due to high gas pressures, which register 1,950 pounds on the tubing and 2,000 pounds on the casing, it is doubtful if the well can be completed as an oil well. It is bottomed in the same sand as the discovery well, which is a south offset.

## Wildcat Operations in Southwest Texas

**Week Ending June 1**

**BANDERA COUNTY**

Plateau Oil Co.'s No. 1 Garrison, G.C.&S.F. Sur. No. 506, 1,500 ft. from W and 2,970 ft. from N lines of survey.
Standing 3,409 ft.

Palm Winn Oil Co.'s No. 1 Watson, Sur. No. 71 (workover).
T.D. 1,700 ft.; reaming.

**BASTROP COUNTY**

Batts & Jarnson's No. 1 Mrs. Anneta Harris (Bateman), 576 vrs. (1,600 ft.) NW line, 630 vrs. (1,750 ft.) SW line, John Maxmillan Sur. 22.
S.D. 235 ft.

Malone & Owens' No. 1 Spooner, 500 ft. from N line, 3,550 ft. from SW line of Leverenz Sur.
Drlg. hard lime 2,168 ft.

**BEE COUNTY**

Dirks Bros. et al's (Daugherty et al) No. 1 Hicks, N 70 deg. 40 ft. W 975 ft. from E line, N 19 deg. 38 ft. E 1,361 ft. from S line, NW cor. Blk. 45, Uranga grant.
Drlg. 3,965 ft.

Dirks Bros.' No. 1 Miller, 330 ft. from N and E lines of tract, C. Rivas Sur.
Rigging up.

Firm Oil Co.'s No. 1 Copeland, 1,650 ft. from N line, 330 ft. from E line of lease, B. O. Hadley Sur.
Set csg. 250 ft.; W.O.C.

G. M. Church's No. 1 J. C. Woods, 330 ft. from N line, 330 ft. W of road, J. Ryan Sur.
Moving in material; S.D.

Humble O. & R. Co.'s No. 2 Thompson, 466 ft. SW of SE cor. of J. C. Wood tract, 466 ft. SW on line parallel to E line, Wm. Burke Sur.
Set 7-in. csg. 5,835 ft.

Francis P. Hynes' No. 1 Theo. M. Plummer. 330 ft. from W line, 990 ft. from S line of Sec. 33, Theo. M. Plummer Subd.
Waiting on new D.S. test, 1,550 ft.

Felmont Corp.'s No. 1 T. J. Ernest, 466 ft. from SE cor. of J. C. Madray 216-ac., thence 460 ft. NW along survey line, thence S of R/A 466 ft., Bee County School Sur.
Drlg. 6,350 ft.

**BEXAR COUNTY**

Cherokee Drlg. Co.'s No. 1 Chapman, 2,100 ft. from S line, 3,200 ft. from E line, A. J. Leslie Sur.
S.D. 400 ft.

Jas. B. Cunningham's No. 1 L. F. Ridder, 950 ft. S of Nelson Road, 1,300 ft. from E line, Block 5,196, Sur. No. 58.
Fishing 1,050 ft.

Jones & Kieffer's No. 1 LaGrane, NW cor. of tract, 210 ft. each way, F. Rolen Sur. No. 48.
T.D. 1,010 ft.; bailed some 38.3 gravity oil; S.D.

McPhee & Briggs' No. 1 F. Lamb, 9,200 ft. from S line, 800 ft. from W line of Sur. No. 3 (Manuel de Luna).
Standing 1,902 ft.

Mid-Texas Prod. Co.'s No. 1 C. G. Welka.
Location.

Noble & Akins' No. 1 DeVilbiss.
T.D. 2,232 ft.; having trouble with heaving sand; showing little oil and gas.

Carroll C. Raborn's No. 1 Claude McCauley, 150 ft. from N and NW lines of tract in Sec. 53, Wm. Harrison Sur.
Standing 400 ft.

C. C. Raborn's No. 1 A. B. Stephens, 1,630 ft. from N line, 1,540 ft. from W line of tract, P. B. Hayes Sur. No. 3.
Moving in rotary; T.D. 400 ft.; shale.

Rowan & Nichols Oil Co.'s No. 1 Zigmund, 2,250 ft. WE line, 1,750 ft. NS line, A. Deffenbaugh Sur.
Drlg. Buda lime 1,575 ft.

**BLANCO COUNTY**

H. T. Roe and W. E. Nixon's No. 1 Polk Morrisey, 2,000 ft. from W line, 1,000 ft. out of SE cor., 1,600 ft. from N line of Thomas H. Webb Sur. No. 91.
Location.

**CALDWELL COUNTY**

Ogden & Reed's No. 1 Mrs. H. Brewer, 1,000 ft. from NE line, 150 ft. from SE line of tract in Martinez Sur.
Drlg. 425 ft.

Ogden & Reed Oil Co.'s No. 1 J. A. Compton, 450 ft. NE of NW line, 150 ft. SE at right angles out of NW cor. of P. Martinez Sur.
Abd. 1,600 ft.

**DEWITT COUNTY**

Stewart's No. 1 Kleberg, 650 ft. from W line and midway N and S lines of tract, Tommelson Sur.
210 ft.; S.D.; dropped from report.

**DUVAL COUNTY**

Mills Bennett's No. 2 D.C.R.C., 1,200 ft. S of W cor. of Sur. 50, thence N 990 ft. in Sur. 258.
Abd. 3,396 ft.

Intrepid Oil Co.'s No. 2 Parr, 330 ft. from N and W lines of 80-ac. tract, Sur. 115.
8-in. D.S. test from 4,777-86 ft.; run 30 ft. of mud with brackish taste; made 22-in. D.S. test from 4,777-4,803 ft.; D.S. test 4,795-4,804 ft.; 5/16-in. choke; tested 2 joints oil-mud, no gas pressure; set csg.

J. J. O'Byrne's No. 1 Ball, 330 ft. from S and W lines of Tract 3, Santas Flores grant.
Rigging up.

Santa Clara Oil Co.'s No. 1 Wood-Welder, 2,200 ft. W line, 330 ft. N line, Sec. 385, D.S. test 2,473-77 ft.; showed 315 lbs. gas pressure; 4-in. hole deepened to 2,481 ft.; D.S. test 2,477-81 ft. tested 1,350 ft. P.L. oil in 10 min.; 7-in. csg. 2,475 ft.; ¼-in. choke.

**FAYETTE COUNTY**

Ross Fenton's No. 1 Kasper (263-ac), 3,000 ft. from NE line, 1,280 ft. from SW line, of Thos. Green Sur. No. 28.
Checking titles.

**FRIO COUNTY**

W. T. Shoemaker's No. 1 M. Roche. 150 ft. SW cor. of Carl Wenzel Sur. No. 139.
Standing in Edwards lime 3,743 ft.

**GOLIAD COUNTY**

Keystone Royalty Co.'s No. 1 M. Woods, SW part of county, 15,000 ft. from SW line, 5,000 ft. from NW line of J. Sherman Sur.
Drlg. 3,620 ft.

Walter Taber et al's No. 1 Handley, 370 ft. S, 100 ft. E of NE cor. of 2,400-ac. tract, in Daley Sur.
Moving in material.

**GUADALUPE COUNTY**

Bob Gode et al's No. 1 Hicks, 1,320 ft. from E line, 150 ft. from S line of 189-ac. tract in Santo Y. Coy Sur.
Spudded.

A. D. Locke's No. 1 Lowman, 210 ft. from SE and SW lines of 2,500-ac. tract in C. Campbell Sur.
T.D. 1,265 ft.; sidetracked and drilled to old T.D.

Mineral Oil Corp. of Texas' No. 1 Allen Phillips, 162 ft. from N line, 900 ft. from E line of tract, Cortinos Sur.
S.D.; shale 809 ft.

W. A. Scrutchin's No. 1 A. H. Smith, 150 ft. from E line, 1,350 ft. from N line of 34.5-ac. tract, Jas. B. Cowan Sur.
Standing 75 ft.

J. S. Suttle's No. 2 Baenziger, S of Seguin. Old well; R.U. to W.O.

Suttle et al's No. 1 Baenziger, 700 ft. from S line, 500 ft. from E line of 125-ac. tract, Monsola Sur.
T.D. 2,153 ft.; tested small show oil; to acidize.

W. J. Walton's No. 2 Zaboroski, 180 vrs. (500 ft.) SW of No. 1, 190.8 vrs. (530 ft.)

(Continued on Page 47)

## ROCKY MOUNTAIN RUNS

Estimated daily average crude oil production for the week ending June 1 follows:

| | Bbls. |
|---|---|
| **WYOMING** | |
| Salt Creek | 17,450 |
| Big Muddy | 1,710 |
| Badger Basin | 30 |
| Black Mountain | 250 |
| Byron | 1,290 |
| Dallas Derby | 610 |
| Dutton Creek | 80 |
| Elk Basin | 40 |
| Ferris | 20 |
| Frannie | 480 |
| Garland | 1,200 |
| Grass Creek | 340 |
| Greybull | 10 |
| Hamilton Dome | 1,510 |
| Hudson | 260 |
| LaBarge | 1,160 |
| Lance Creek | 1,510 |
| Lost Soldier | 1,040 |
| Mule Creek | Shut in |
| Midway | 70 |
| Notches | Shut in |
| Oregon Basin | 2,990 |
| Osage | 760 |
| Pilot Butte | 30 |
| Rex Lake | Shut in |
| Rock River | 1,450 |
| South Casper | Shut in |
| Poison Spider | 230 |
| Teapot | 20 |
| Waugh Dome | 600 |
| Total Wyoming | 35,140 |
| **MONTANA** | |
| Buckley-Border | 260 |
| Cat Creek | 760 |
| Cut Bank | 4,850 |
| Dry Creek | Shut in |
| Kevin-Sunburst | 3,300 |
| Lake Basin | 50 |
| Pondera | 1,020 |
| Total Montana | 10,240 |
| **COLORADO** | |
| Florence | 200 |
| Fort Collins and Wellington | 420 |
| Hes Dome | 2,570 |
| Moffat | 410 |
| Orchard | 80 |
| Rangely | 70 |
| Tow Creek | 160 |
| Total Colorado | 3,910 |
| **NEW MEXICO** | |
| Artesia | 700 |
| Cooper area | 5,050 |
| Eunice area | 6,600 |
| Hobbs | 30,860 |
| Hogback | 140 |
| Hospah | Shut in |
| Jal | 3,450 |
| Lea area | 1,370 |
| Maljamar | 1,930 |
| Rattlesnake | 700 |
| Table Mesa | 50 |
| Total New Mexico | 50,850 |
| Total Rocky Mountain region | 100,140 |

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# Important Wildcat Locations Made in West Texas With Drilling Activity Increasing in District

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., June 3.—Features in the Permian Basin and West Texas district during the week were the staking of wildcat and semiwildcat locations in several areas, which, if they make producers will extend production several miles, or may open up other pools.

Following the strike of the Gulf Production Co. on the Goldsmith ranch in Ector County, the Phillips Petroleum Co. has staked locations for two tests on the fringe of the Gulf Production Co.'s 31-section block, but over on Pure Oil Co. holdings, mentioned in this column last week. The two locations fall in Section 14 and Section 23, Block 44, Township 1s, T.&P. Survey. No. 1 location, in Section 14, is in the northwest quarter of the section and approximately 1¼ miles southeast of the Goldsmith discovery. No. 2 location is in the SW Section 23, 1½ miles to the south of No. 1.

The Continental Oil Co. made an interesting location in Section 21, Block 43, Township 1s, T.&P. Survey, on the Wight ranch in Ector County. It is southeast of production about 3½ miles and about the same distance northwest of an outpost producer north of the Addis Pool. The Eppenauer Drilling Co. of San Angelo and Continental Oil Co. also made location in Section 22, Block 43, in the same township and survey. It is about 1¼ miles northeast of Continental's Wight location and on a line with the Cowden and Addis Pools. These two tests may help to prove connecting links between the two pools which are about 12 miles apart, but with one producer in Section 47, Block 43, Township 1s, which may also prove a connecting link.

### Field Limited to East

Barnsdall Oil Co.'s No. 2 Smith, in the SW Section 1, Block 43, Township 1s, T.&P. Survey, about 1 mile east of the nearest southern outpost producer of the Cowden Field, Ector County, has been abandoned at a total depth of 4,381 feet, with an elevation of 3,064 feet. This test proves one of the eastern limits of the Cowden Field, although it is a north offset to a small producer owned by the same company. Tight lime conditions are no doubt responsible for the dry hole offsetting the producer.

Two tests in the extreme northwest corner of Ector County are nearing completion. They are: Landreth Production Co.'s No. 1-B Holt, in Section 19, Block A, P.S.L. Survey, and Empire Gas & Fuel Co.'s No. 1 Cummins, in Section 10, Block 45, Township 1n, T.&P. Survey. Location of the two tests in connection with the two widely separated wildcat producers, Davidson's No. 1 Cummins and Landreth Production Co.'s No. 1 Scharbauer, make these tests especially important.

### World's Deepest Test

Gulf Production Co.'s No. 103 McElroy, in Section 197, Block F, in the McElroy Permian lime field which lays mostly in Crane County, is still swabbing in order to lower water preparatory to plugging back and testing two deep showings of oil. If these streaks fail to produce a commercial well, the test will be plugged back to around 3,000 feet and produced from the Permian lime.

### Mitchell County Wildcat

The Texas Co. has machine rigged up on a wildcat location near the Howard County line in Mitchell County. Location is in Section 62, Block 29, Township 2s, T.&P. Survey, about 660 feet from the Howard County line. This will be the first wildcat the company has drilled in this district for a long time.

### Iatan Field—Howard County

One of the most important and active fields in the West Texas district, but also one of the least publicized, is the Iatan Field in the eastern part of Howard County. The field, discovered in 1928, laid idle for about four years, when a wildcat test about 4 miles to the west proved a producer. Later other tests were drilled on outpost acreage, proving that a field of some size was located in the area. During the past year activities have been increasing, with the Sinclair Prairie Oil Co., Shasta Oil Co., International Petroleum Corp., Iron Mountain Oil Co., Magnolia Petroleum Co., California Co. and some independents participating in the development of the widely spread field. One well is expected to be drilled to each 10 acres, which will call for the ultimate drilling of 1,000 wells in the field. Though the wells are not large, the first ones drilled have held up in production, thereby leading to the conclusion that all will be long-lifers. Most of the drilling is done by spudders and machines, the wells being put on the pump as they are completed. The pool now extends 4½ miles from east to west and 2½ miles from north to south. There are now 20 tests going down in the field with several locations being staked each week for others.

The Texas Co. has staked location for No. 1 O. Schalk, in the W half of Section 18, Block 19, Lavaca Navigation Co. lands. This location is 6½ miles south of the above named field, in Howard County, and may prove an important extension to it. The Eastland Oil Co. is drilling No. 1 D. H. Snyder in the SW cor. of Section 28, Block 30, Township 1s, T.&P. Survey, 3 miles south of the field. Mr. Wooten of Abilene is to drill in the NW ¼ of Section 46, Block 30, Township 1n, which will prove a one-half mile north extension to the pool if it makes a producer. The field is not yet defined in any direction, although Slagel and others have just completed a small producer in Section 43, Block 29, on the northeast flank of the field, which may limit drilling in that direction. The well only made 48 bbls. per day on the pump, initial production. The Col-Tex Refining Co. of Colorado, Tex., is taking most of the oil, the Magnolia Pipe Line Co. taking oil from only two wells in the field. The per well allowable for the field is 20 bbls. plus 9 per cent of the potential. Many wells will be drilled in the field during the next six months.

### Runnels County Wildcat

Wolverton and others have staked location on the Willingham farm, in the Wilhelm-Wolfgang Survey No. 425, 1½ miles southeast of Ballinger, in Runnels County. This location is about 10 miles south of the Ballinger Pool, which produces high gravity sweet oil from sand from 2,500 to 2,525 feet.

### Taylor County Location

Anderson and others have staked location on the J. C. High lands, in Section 8, L.&L. Survey, about 2½ miles south of Abilene, in Taylor County, for a test. This location is in the area where Clark and others recently acidized an old abandoned test and made a producer out of it. One other test is drilling in Section 8 at the present time.

### Ward County Locations

The Wahlenmaier Petroleum Corp. proposes to drill a test in the S ¼ of Section 28, Block B-29, P.S.L. Survey. Another test for the county is also proposed by this company.

There were 17 locations staked in the West Texas district this week with 16 tests being completed.

### RANGER AND WICHITA FALLS

Tom B. Owens of Fort Worth is assembling a block of approximately 6,000 acres centering around the town of Odell in Blocks 10 and 11, H.&T.C. Survey, in Wilbarger County. A 3,500-foot test is scheduled to be drilled in an area in which four tests were drilled from 2,000 to 2,500 feet about 10 years ago.

H. C. Mortlock and C. B. Duffield are purchasing leases on around 5,000 acres centering in Section 61, Block 16, H.& T.C. Survey, Wilbarger County, for J. F. Forrester of Kansas City, Mo. The block extends over into Hardeman County. A 4,000-foot test is proposed for this block.

The Charter Oil Co. of Albany has sold its leases in the NE¼ of Section 200, Block 10, E.T.R.R. Survey, Shackelford County, consisting of 160 acres with eight wells producing 105 bbls. per day from the Hope sand. Hoffman and Page of Cisco are the purchasers and are expected to drill a number of tests on the lease.

J. J. Perkins and others of Wichita Falls have sold their 113.5-acre lease on the Mrs. L. Campbell lands in the B.B. B.&C. Survey, Abstracts 128 and 148, Cooke County, to the Petroleum Producers Co. The lease is a south offset to a lease on which a 108-bbl. well is producing from sand logged at 707-17 feet.

The Southern Oil Corp. of Abilene has extended the Fisher lime area in the northeast corner of Fisher County by one-half mile west and one-quarter mile north. The company's No. 1-D A. E. Pardue, located in Section 202, B.B.B.& C. Survey, logged saturated lime from 3,111-23 feet and made an initial production of 1,000 bbls.

Production in the Wichita Falls district averaged 63,425 bbls. per day during the week.

### PANHANDLE DISTRICT

During the past week the towns of Kirkland, Childress and other nearby villages in Childress and Hardeman Counties have been experiencing their first oil boom. However, with Alma Oil Co.'s No. 1 Mollie Lowe, in Section 417, showing some water with a decline in the oil percentage of the fluid in the hole, companies and independents are losing considerable interest in the test and area.

The test, located about 3 miles southeast of the town of Kirkland in the extreme southeast corner of Childress County, is expected by some to come through as some kind of a producer thereby opening up the first production in the county, which will lead to a greater lease and royalty "play" than has been taking place since the test showed some oil about 14 days ago. Total depth is 5,653 feet. The bridge was washed out and the hole washed with clear water for 12 hours. Fluid in the hole was swabbed down to 1,500 feet. It showed 15 per cent oil, the balance wash water.

(Continued on Page 44)

## Wildcat Operations in West Texas

Week Ended June 1

**ANDREWS COUNTY**

Fuhrman Pet. Corp.'s No. 2 Ford, 440 ft. from S and 1,320 ft. from E, Sec. 16, Blk. A-43.
Drlg. 3,826 ft.

Honolulu & Llano Oil Co.'s No. 1-B Parker, 440 ft. from N and 1,650 ft. from E, Sec. 11, Blk. A-42.
Elev. 3,281 ft.; drlg. 4,132 ft.

Humble Oil & Ref. Co.'s No. 4 Means, 1,982 ft. from N and 660 ft. from E, Sec. 12, Blk. A-35.
Rigged up.

Humble Oil & Ref. Co.'s No. 4 Means, 654 ft. from S and 1,997 ft. from W, Sec. 4, Blk. C-45.
Elev. 3,185 ft.; drlg. 4,055 ft.

Republic Prod. Co.'s No. 1 Boner-State, 2,200 ft. from S and 1,320 ft. from E, Sec. 25, Blk. A-43.
To set csg.; T.D. 1,735 ft.

J. W. Trippiehorn's No. 1 Ogden, 330 ft. from S and 2,310 ft. from W lines of Sec. 6, Blk. A-46, P.S.L. Sur.
Elev. 3,211 ft.; S.D. 111 ft.

Wahlenmaier et al's No. 1 Odessa Ranch Co., 1,320 ft. from N and E of Sec. 10, Blk. A-32, P.S.L. Sur.
Elev. 3,307 ft.; drlg. 3,175 ft.

Wahlenmaier et al's No. 1 Cox Estate, 1,320 ft. from N and W of Sec. 8, Blk. A-33.
Rotary rig.

**BREWSTER COUNTY**

F. C. Dodson's No. 1 Texas American Syndicate, 660 ft. from N and E, Sec. 66, Blk. 10, G.H.&S.A. Sur
Elev. 4,228 ft.; S.D. 950 ft.; rigged up rotary.

Joiner et al's No. 1 McIntyre, 353 ft. from S, 2,390 ft. from E of Sec. 21, Blk. 352, W. M. Mitchell Sur.
S.D. 2,160 ft.

King & Franklin's No. 1 Gage Est., C Sec. 138, Blk. 32, G.H.&S.A. Sur.
Elev. 4,344 ft.; S.D. 1,185 ft.

G. H. Storey's No. 1 Wilson, 1,980 ft. from N and E lines of Sec. 3, Blk. 212, T.&St.L. Sur.
Elev. 3,609 ft.; drlg. 1,340 ft.

S. G. Smith's No. 1 Decie, 2,490 ft. from S and E, Sec. 7, Blk. 1.
Elev. 4,271 ft.; S.D. 982 ft.

**COCHRAN COUNTY**

Kelsey's No. 1 Slaughter, C Labour 36, League 150, R.C.S. Lands.
Derrick.

West Texas Development Co.'s No. 1 Slaughter, near C of Labour 53, League 149, Randall Co. School Lands.
Derrick.

**COKE COUNTY**

Haggerty et al's No. 1 Gaston, 340 ft. from S and 654 ft. from W, Sec. 11, Jos. Young Sur. (old well deepening).
Cleaning out 3,037 ft.

**CRANE COUNTY**

Cranfill Bros.' No. 1 Tubbs, 330 ft. from S and W of Sec. 11, Blk. B-27, P.S.L. Sur.
Elev. 2,536 ft.; gas at 2,785-90 and 2,815-20 ft.; drlg. 2,855 ft.

Dobbs Oil Co.'s No. 1 J. Cowden et al, 330 ft. from S and E of N half, Sec. 38, Blk. 1, H.&T.C. Sur.
Rig.

Gulf Prod. Co.'s No. 10 Waddell, C NW ¼ Sec. 11, Blk. B-23.
Rigged up standard tools.

Gulf Prod. Co.'s No. 1 Henderson, 1,313 ft. from S and 1,322 ft. from E, Sec. 3, Blk. B-23, P.S.L. Sur.
Elev. 2,778 ft.; drlg. 2,440 ft.

Gulf Prod. Co.'s No. 1 M. B. McKnight, 660 ft. from S and W, Sec. 9, Blk. B-21.
Elev. 2,679 ft.; drlg. 2,972 ft.; show oil 2,895-2,902 ft.

Gulf Prod. Co.'s No. 1 Waddell, C NW NW Sec. 4, Blk. B-27, P.S.L. Sur.
S.D. 4,595 ft.; repairing rig.

Magnolia Pet. Co.'s No. 1 Edwards, 330 ft. from S and 1,650 ft. from E, Sec. 2, Blk. B-23.
Elev. 2,778 ft.; drlg. 1,675 ft.

**CROCKETT COUNTY**

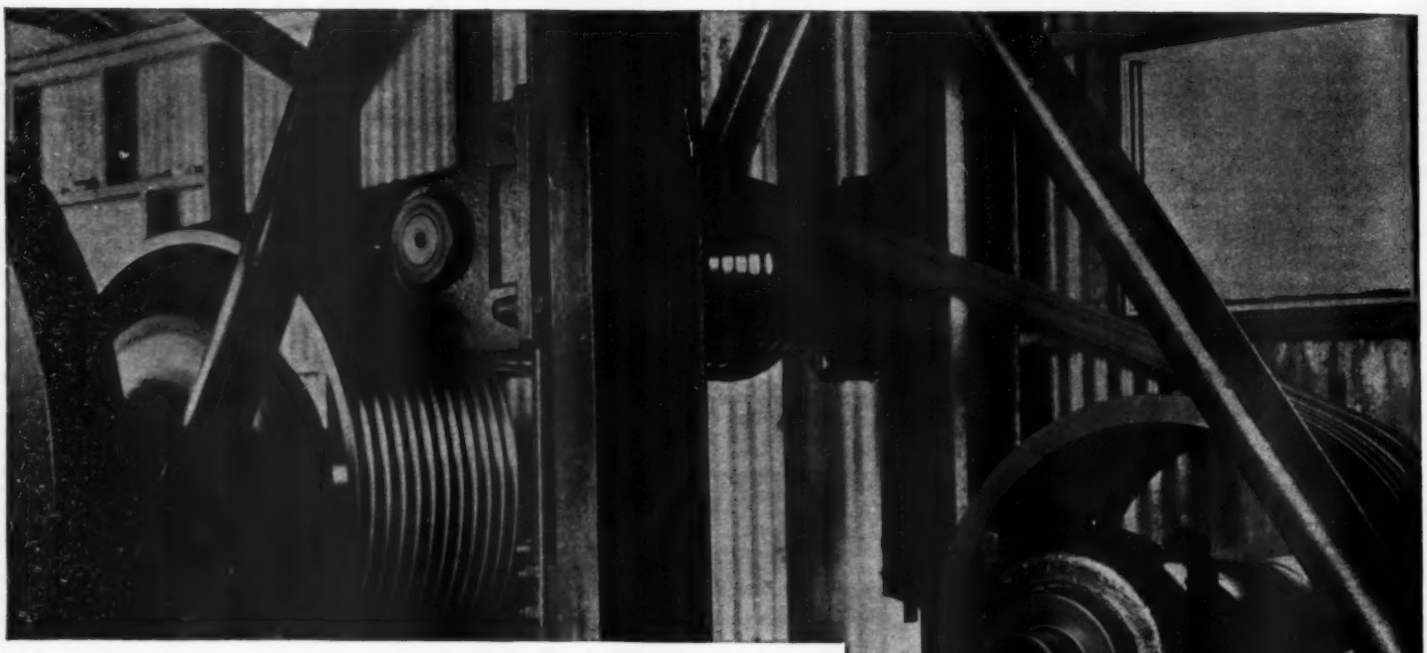
Adkins Bros.' No. 1 Shannon, 320 ft. from S and 630 ft. from W of 80 in SW ¼ Sec. 27, Blk. WX, G.C.&S.F. Sur.
Location.

Leslie-Hiller et al's No. 1 Todd, 1,200 ft. N and 330 ft. E, Sec. 26, Blk. WX, G.C.& S.F. Sur.
Fishing 715 ft.

Humble Oil & Ref. Co.'s No. 1 Couch, C NW Sec. 3, Blk. QR, G.C.&S.F. Sur.
Temporarily abnd. 1,881 ft.; elev. 2,538 ft.

(Continued on Page 46)

# Keeping up the TIMKEN TRADITION in the Oil Fields



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It takes more than friction elimination to meet oil field requirements, and in the exclusive combination of Timken tapered construction, Timken positively aligned rolls and Timken Alloy Steel, Timkens have what it takes—radial-thrust load capacity; ability to hold moving parts in correct and constant alignment; and supreme endurance. Specify Timken-equipped.

Dodge-Timken Pillow Blocks on pumping power unit in the Texas oil field.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

**TIMKEN** *TAPERED ROLLER* **BEARINGS**

# Revived Interest in Rusk Pool, Cherokee County; New Wildcat Locations in Five Counties

By L. E. BREDBERG

DALLAS, Tex., June 3.—The second well for the Rusk Pool, Cherokee County, has livened things up in that area, and the operators drilling in the discovery and subsequent producer, with one dry hole registered to the southwest, have made location for a fourth test with two other tests to be drilled consecutively on locations spaced 300 feet apart from each other along the east line of the lease and extending to the north line of the New Birmingham Development Co.'s lease in the Levi Jordan Survey. No. 4 location is 600 feet north of No. 3, the well just completed for an initial production of 328 bbls. the first 24 hours through three-sixteenths inch tubing choke. Total depth is 5,179 feet, and the oil tested 42 degrees, or practically the same as that in the discovery well approximately 800 feet northwest. The area again promises to become interesting after lying idle for about nine months. Elevation of the test is 478 feet. The last 2½ feet cored showed saturated oil sand. There is no water in this second producer as there is in the discovery, although this second producer is about 10 feet lower on structure. The Austin chalk was logged at 4,940-5,175 feet. There is still plenty of untested acreage to prove a nice size Woodbine sand field, and companies that spent considerable money when the hot lease play was on last summer may yet realize something from their investments.

### Camp Hill Pool

The second dry hole in the Camp Hill Pool, about 7 miles southeast of Palestine, in east Anderson County, was abandoned at a total depth of 5,276 feet this week. Elevation is 635 feet. This test, drilled by Gulf Production Co. on the Robinson tract in the D. Stilts Survey, is only a quarter of a mile west of a sub-Clarksville producer on the Maddox farm in the same survey, also owned by the Gulf, but the Robinson test failed in both the sub-Clarksville and the Woodbine sands. Top of the Woodbine sand was logged at 5,240 feet.

Gulf Production Co.'s No. 1 Delaney, in the Phillips Martin Survey, due south of its No. 1 Maddox producer, logged base of the Pecan Gap chalk at 3,145 feet and is drilling below 4,625 feet. The same company's No. 1 Southern Pine Lumber Co., north offset to its No. 1 Davey and Royall discovery well, has base of the Pecan Gap chalk at 4,245 feet, top of the Austin chalk at 4,870 feet, according to the driller, and is now drilling below 5,000 feet. This test should encounter the sand within a day or two and signify whether the pool is to extend to the north.

Out of the 14 miscellaneous locations staked in the East Texas district this week seven were in the Cayuga Field, mostly in the north extension to this pool in northwest Anderson County. Tide Water Oil Co. and Texas Seaboard Oil Co.'s Trinity sand test on the Wills farm, in the S. Edmondson Survey, in the field, is drilling below 8,250 feet.

### Wildcat Locations

Fannin, Henderson, Leon, Smith and Wood Counties each received a location for a wildcat Woodbine sand test this week. Wilson and others are drilling No. 1 Hancock in Section 16, L. M. Baldock Survey, one-half mile south of Trenton in Fannin County, and H. Williams and others are coring below 2,200 feet on No. 1 Henry in the R. Rogers Survey, 2 miles east of Normangee in Leon County. Sun Oil Co. and Hunt Production Co. are to make another try in the Tyler area of Smith County. They have moved material on the E. W. Judge 55.5-acre tract, 3½ miles southeast of Tyler and are to start drilling within a few days.

Dean Brothers, of Fort Worth, have rigged up on location on the W. H. Finklea farm in the B. Anderson Survey, 2½ miles southwest of Yantis in Wood County for a wildcat, and C. D. Neff and others have moved in material on the H. G. Small farm in the I. Greeson Survay, southwest of the town of Cross Roads, in Henderson County.

### Anderson County Wildcat

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 C. T. Valentine, wildcat drilling in the John Little Survey, 7 miles north of Palestine, is below 5,075 feet in shale with lime streaks. Base of the Austin was reported between 4,980-90 feet, with an elevation of 459 feet. This is one of the most interesting wildcats in the district.

Hunt Production Co. and Sun Oil Co. are trying to make a Carrizo sand producer of No. 1-A Scott, their second test in the Slocum area, in the James Crawford Survey. The first was a dry hole drilled to the Woodbine sand. The second test is now drilling plugs at total depth of 1,115 feet. It logged sand between 1,090 and 1,115 feet. Casing was cemented at 1,020 feet.

### Cayuga Proration

On May 30 the Railroad Commission was conducting tests of potential flows in the Cayuga Field, northwest Anderson County, results to be used in the possible fixing of new allowables although major companies producing in the field are asking that the proration method be revised to include an acreage factor. According to their plan the minimum allowance to wells on small tracts would be 25 bbls., applying to wells on tracts less than seven acres. Maximum allowables to wells with high potentials on 20-acre units would be 75 bbls. Independents who own smaller tracts protested against such a large part of the allowable being allocated on the acreage basis. They favor the present potential method, or in the alternative, that not more than 25 per cent of the total field allowable be distributed on the acreage basis.

### EAST TEXAS FIELD

There were 157 locations reported in the East Texas Field this week with 117 completions. Part of this increase in operations was a carry-over from last week when a full report was not turned in on new activities. Five of the wells were placed on the pump as completed and four others were completed as "swabbers," all being located in Rusk County, and in the eastern extensions along the field from north to south.

### COMPLETIONS IN EAST TEXAS

#### Gregg County

Amerada Petroleum Corp.'s No. 13 Bumpus, top pay 3,569 feet, total depth 3,600 feet, initial production 37 bbls. in 30 minutes. Arcadia Refining Co.'s No. 5 Anderson, top pay 3,588 feet, total depth 3,617 feet, initial production 30 bbls. in 30 minutes, through 1-inch choke. Atlantic Oil Producing Co.'s No. 6 Fuller, top pay 3,683 feet, total depth 3,714 feet, initial production 70 bbls. per hour; No. 1 Jones, top pay 3,629 feet, total depth 3,656 feet, initial production 96 bbls. per hour; No. 74 Judge, top pay 3,504 feet, total depth 3,520 feet, initial production 134 bbls. per hour; No. 8 Tuttle, top pay 3,567 feet, total depth 3,637 feet, initial production 110 bbls. per hour. C. & G. Oil Co.'s No. 20 Harris, top pay 3,535 feet, total depth 3,558 feet, initial production 40 bbls. in 30 minutes. Clark and Cowden's No. 8 Christian, top pay 3,625 feet, total depth 3,651 feet, initial production 110 bbls. per hour.

Empire Gas & Fuel Co.'s No. 5 Jeter, top pay 3,574 feet, total depth 3,576 feet, initial production 22 bbls. in 15 minutes; No. 17 Jeter, top pay 3,527 feet, total depth 3,560 feet, initial production 32 bbls. in 15 minutes. Faith Oil Co.'s No. 15 Barnett, top pay 3,633 feet, total depth 3,660 feet, initial production 20 bbls. in 35 minutes. Fleming and Kimball's No. 9 Barnes, top pay 3,669 feet, total depth 3,712 feet, initial production 80 bbls. per hour. Gulf Production Co.'s No. 27 Fishburn, top pay 3,507 feet, total depth 3,537 feet, initial production 72 bbls. per hour. Hanbury's No. 1-B Gage, top pay 3,652 feet, total depth 3,658 feet, initial production 35 bbls. in 30 minutes. Humble Oil & Refining Co.'s No. 13 Hughes, top pay 3,604 feet, total depth 3,629 feet, initial production 81 bbls. per hour. Iowa-Payne Oil Co.'s No. 7 York, top pay 3,590 feet, total depth 3,596 feet, initial production 40 bbls. per hour through 1-inch choke.

Kewanee Oil & Gas Co.'s No. 20 Hampton, top pay 3,563 feet, total depth 3,606 feet, initial production 32 bbls. in 30 minutes. Magnolia Petroleum Co.'s No. 7 Beavers, top pay 3,526 feet, total depth 3,554 feet, initial production 139 bbls. per hour. Nathan Oil Co.'s No. 12 Walker, top pay 3,566 feet, total depth 3,571 feet, initial production 72 bbls. per hour; No. 13 Walker, top pay 3,601 feet, total depth 3,602 feet, initial production 78 bbls. per hour through 1-inch choke. Shell Petroleum Corp.'s No. 20 King, top pay 3,556 feet, total depth 3,621 feet, initial production 35 bbls. in 30 minutes. Sorrell's No. 1 fee, top pay 3,506 feet, total depth 3,564 feet, initial production 50 bbls. in 30 minutes. Sun Oil Co.'s No. 28 Haynes, top pay 3,581 feet, total depth 3,622 feet, initial production 75 bbls. per hour. Superior Oil Co.'s No. 10 Jones, top pay 3,580 feet, total depth 3,653 feet, initial production 38 bbls. in 15 minutes. F.H.E. Oil Co.'s No. 19 Christian, top pay 3,683 feet, total depth 3,720 feet, initial production 30 bbls. in 20 minutes. Hanbury's No. 1 Bulowe, top pay 3,630 feet, total depth 3,641 feet, initial production 35 bbls. in 30 minutes.

Lucey Petroleum Co.'s No. 7 Christian, top pay 3,595 feet, total depth 3,614 feet, initial production 90 bbls. per hour through 1-inch choke. Bay Oil Co.'s No. 6 Smith, top pay 3,541 feet, total depth 3,560 feet, initial production 108 bbls. per hour. Burnham and Johnson's No. 1 King, top pay 3,655 feet, total depth 3,658 feet, initial production 100 bbls. per hour. Galvez Oil Co.'s No. 14 Cole, top pay 3,542 feet, total depth 3,558 feet, initial production 15 bbls. in 20 minutes. Gulf Production Co.'s No. 37 Spear, top pay 3,541 feet, total depth 3,569 feet, initial production 85 bbls. per hour; No. 15 Strong, top pay 3,679 feet, total depth 3,689 feet, initial production 80 bbls. per hour; No. 17 Watson, top pay 3,561 feet, total depth 3,587 feet, initial production 70 bbls. per hour. Kilgore Refining Co.'s No. 8 I.&G.N. Railway, top pay 3,551 feet, total depth 3,597 feet, initial production 70 bbls. per hour. Lockhart's No. 2 Weiss, top pay 3,615 feet, total depth 3,623 feet, initial production 120

## East Central Texas Wildcats

Week Ending June 1

**CAMP HILL AREA—ANDERSON COUNTY**

Gulf Prod. Co.'s No. 1 DeLaney, 200 ft. out of most northerly NW cor. of 173.2-ac. tract; elevation 573 ft.; P. Martin Sur.
Top Pecan 3,890 ft.; drlg. 3,945 ft.

Gulf Prod. Co.'s No. 1 Southern Pine Lumber Co., 330 ft. out of SE cor., H. Main Sur.
Top Pecan 3,929 ft.; drlg. 4,240 ft.

Hunt and Sun Oil Co.'s No. 2 Alice Scott, 30 ft. N of No. 1, James Crawford Sur. T.D. 1,116 ft.; D.S. test 1,025-52 ft.; 60 ft. mud and 3 ft. greenish oil in 15 minutes.

J. W. Luttes' No. 1 C. McKee, 2,640 ft. from N line of lease and survey and 330 ft. from W line of McKey 300-ac. tract.
S.D. 221 ft.

**CAYUGA AREA—ANDERSON COUNTY**

Tide Water Oil Co. et al's No. 21-A Wells, 4,079 ft. N and 2,333 ft. W of lease, S. Edmondson Sur. (Trinity test).
Drlg. 8,253 ft.

**LONG LAKE AREA—ANDERSON COUNTY**

Tide Water Oil Co. et al's No. 1 Shaw and Kern, 1,400 ft. from S and 2,333 ft. from E line, in D. Parker Sur.
Rigged up.

**BOWIE COUNTY**

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 600 ft. E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River.
Sidetracking bit 1,098 ft.

**CHEROKEE COUNTY**

H. A. Baker et al's No. 1 T. Smith, 630 ft. S and 660 ft. W of SW cor. of W. A. Newton's 260-ac. tract, 2½ miles N of Jacksonville, J. Pineda Sur.
Drlg. 123 ft.

Scott & Turpin's No. 1 Whiteman & Decker, 450 ft. N and 150 ft. W, J. H. Armstrong Sur.
Elev. 546 ft.; S.D. 212 ft.

Jacksonville O. & G. Co.'s No. 1 H. D. Henderson, 660 ft. from N and W lines of 40-ac. tract out of Tankersley 104-ac. tract, 5 miles NE of Jacksonville, J. Pineda Sur.
S.D. 693 ft.

Wilson Stubbs Oil Co.'s No. 1 Rowborts, 450 ft. from S line, 150 ft. from W line of 100-ac. tract, 2 miles SW of Jacksonville, J. D. Wolfin Sur.
S.D. 1,553 ft.

Wood et al's No. 4 New Birmingham Dev. Co., 750 ft. S and 150 ft. E line, 600 ft. N of No. 3.
Derrick.

**FANNIN COUNTY**

B. F. Allen's No. 1-B Argo, center of 16½-ac. tract in J. G. Swisher Sur., 1 mile S of Ector.
Rigged up.

Keen et al's No. 1 R. L. and W. M. Kelley, 660 ft. from E and 480 ft. W, E. Johnson Sur., 3 miles W of Ladonia.
Derrick.

Wilson et al's No. 1 Hancock, 400 ft. from W and 150 ft. from N lines, Sec. 16, L. M. Baldock Sur., ½ mile S of Trenton.
Drlg. 125 ft.

**FREESTONE COUNTY**

Hoover et al's No. 1 McFall, 150 ft. S and W lines, S. Garrison Sur., E of Mexia.
Location.

J. E. Milburn's No. 1 S. E. McShan, 4,000 ft. NW and 5,000 ft. NE of tract, 3 miles SE of Donie, G. Diaz Sur.
S.D. 270 ft.

**GREGG COUNTY**

O. T. Clark's No. 1 Williams, 2,100 ft. from S and 2,400 ft. from W of D. Hill Sur., 3 miles NE of Longview.
S.D. 3,771 ft.

**HENDERSON COUNTY**

Great State's No. 1 Ansley, 1,724 ft. W and 300 ft. S of SE cor. of M. Matthews Sur., N. H. T. Thompson Sur.
S.D. 3,315 ft.

C. D. Neff et al's No. 1 H. G. Small, 450 ft. from W and 375 ft. from E lines, I. Greeson Sur., SW of Crossroads.
Material.

H. M. Wilson's No. 1 fee, 970 varas S of NE cor. of 943-ac. tract, 5 miles N of Malahoff.
Derrick.

**HOPKINS COUNTY**

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70-ac. tract, 1 mile SE of Miller Bros. A. Caro Sur.
S.D. 2,950 ft.

**HUNT COUNTY**

Cauble & Thompson's No. 1 Reed, 330 ft. N of northerly NE cor. of C. B. Payne

(Continued on Page 47)

bbls. per hour. Magnolia Petroleum Co.'s No. 3 Coyne, top pay 3,627 feet, total depth 3,645 feet, initial production 104 bbls. per hour. Moss' No. 9 Marshall, top pay 3,532 feet, total depth 3,552 feet, initial production 30 bbls. per hour.

Shell Petroleum Corp.'s No. 15-A Biven, top pay 3,570 feet, total depth 3,612 feet, initial production 42 bbls. in 30 minutes. Stodel Oil Co.'s No. 9 Smith, top pay 3,588 feet, total depth 3,598 feet, initial production 80 bbls. per hour. Sun Oil Co.'s No. 19 Hilburn-Loyd, top pay 3,694 feet, total depth 3,695 feet, initial production 35 bbls. per hour. Texas Co.'s No. 28 Elder, top pay 3,640 feet, total depth 3,668 feet, initial production 75 bbls. per hour. Tide Water Oil Co.'s No. 15 Blackman, top pay 3,639 feet, total depth 3,647 feet, initial production 60 bbls. per hour; No. 26 Hughey, top pay 3,488 feet, total depth 3,500 feet, initial production 12 bbls. in 10 minutes. Welsh and Sandler's No. 7 Barnett, top pay 3,709 feet, total depth 3,711 feet, initial production 60 bbls. per hour.

**Rusk County**

Beren and others' No. 7 Holt, top pay 3,650 feet, total depth 3,682 feet, initial production 20 bbls. per hour. Cordovan Union Oil Co.'s No. 5-C Christian, top pay 3,669 feet, total depth 3,671 feet, initial production 50 bbls. in 30 minutes through three-quarters inch choke. Gulf Production Co.'s No. 16 Florence, top pay 3,696 feet, total depth 3,701 feet, initial production 60 bbls. per hour through three-quarters inch choke. Howell and Hawkins' No. 1 Hedge, top pay 3,542 feet, total depth 3,578 feet, initial production 23 bbls. per hour, pumping.

Humble Oil & Refining Co.'s No. 158 Crim, top pay 3,664 feet, total depth 3,724 feet, initial production 102 bbls. per hour; No. 34-A Laird, top pay 3,616 feet, total depth 3,668 feet, initial production 42 bbls. per hour; No. 34 Peterson, top pay 3,626 feet, total depth 3,660 feet, initial production 90 bbls. per hour. Louisiana Oil & Refining Co.'s No. 11 Jernigan, top pay 3,610 feet, total depth 3,635 feet, initial production 25 bbls. in 15 minutes. Merritt's No. 1 Jones, top pay 3,610 feet, total depth 3,669 feet, initial production 100 bbls. in four hours. Napoleonic Oil Co.'s No. 2 Jones, top pay 3,580 feet, total depth 3,663 feet, initial production 25 bbls. per hour. Navarro Oil Co.'s No. 9 Peterson, top pay 3,646 feet, total depth 3,685 feet, initial production 30 bbls. in 15 minutes. Agey Oil Co.'s No. 1 Moore, top pay 3,538 feet, total depth 3,578 feet, initial production 20 bbls. per hour, swabbing. Apple's No. 2 Moore, top pay 3,580 feet, total depth 3,640 feet, initial production 10 bbls. per hour, pumping.

Bill and Dave Oil Co.'s No. 3 Young, top pay 3,672 feet, total depth 3,743 feet, initial production 47 bbls. per hour. Bond Oil Corp.'s No. 3-A Bradford, top pay 3,528 feet, total depth 3,602 feet, initial production 20 bbls. per hour, pumping. Brown's No. 1 Tipps, top pay 3,570 feet, total depth 3,656 feet, initial production 10 bbls. per hour, pumping. Burwin Oil Co.'s No. 6 Smith, top pay 3,681 feet, total depth 3,726 feet, initial production 100 bbls. in four hours, swabbing. Capital Oil Co.'s No. 2 Frederick, top pay 3,525 feet, total depth 3,625 feet, initial production 20 bbls. per hour. Combine Oil Co.'s No. 25 Eaton, top pay 3,777 feet, total depth 3,788 feet, initial production 50 bbls. per hour. Deering & Son's No. 10 McDavid, top pay 3,682 feet, total depth 3,738 feet, initial production 20 bbls. per hour. Elm Oil Co.'s No. 8 Eaton, top pay 3,726 feet, total depth 3,791 feet, initial production 70 bbls. per hour. Fisher's No. 5-A Wilson, top pay 3,720 feet, total depth 3,800 feet, initial production 86 bbls. per hour. Gant and others' No. 2 Harris, top pay 3,597 feet, total depth 3,626 feet, initial production 25 bbls. per hour.

Gulf Production Co.'s No. 12 Murphy, top pay 3,734 feet, total depth 3,744 feet, initial production 53 bbls. per hour through three-quarters inch choke. Hardin's No. 1 Thompson, top pay 3,565 feet, total depth 3,672 feet, initial production 10 bbls. per hour, swabbing. Haynes Oil Corp.'s No. 10 Brown, top pay 3,667 feet, total depth 3,717 feet, initial production 23 bbls. in 20 minutes. Humble Oil & Refining Co.'s No. 40 Blackwell, top pay 3,641 feet, total depth 3,669 feet, initial production 112 bbls. per hour; No. 36-A Silvey, top pay 3,715 feet, total depth 3,800 feet, initial production 59 bbls. per hour; No. 47-A Silvey, top pay 3,685 feet, total depth 3,769 feet, initial production 94 bbls. per hour; No. 23 Wooley, top pay 3,640 feet, total depth 3,665 feet, initial production 75 bbls. per hour; No. 8 Wooster, top pay 3,714 feet, total depth 3,821 feet, initial production 45 bbls. per hour.

Hunt Production Co.'s No. 4 Barksdale, top pay 3,670 feet, total depth 3,754 feet, initial production 28 bbls. in 15 minutes; No. 22-C Fair, top pay 3,652 feet, total depth 3,668 feet, initial production 29 bbls. in 11 minutes. Marathon Oil Co.'s No. 7 Griffin, top pay 3,663 feet, total depth 3,734 feet, initial production 20 bbls. per hour, swabbing; No. 83 Grissom, top pay 3,640 feet, total depth 3,643 feet, initial production 98 bbls. per hour; No. 84 Grissom, top pay 3,637 feet, total depth 3,643 feet, initial production 96 bbls. per hour. Monterey Oil Co.'s No. 1 Burton, top pay 3,660 feet, total depth 3,705 feet, initial production 60 bbls. per hour. Nemo Oil Co.'s No. 2 Eaton, top pay 3,740 feet, total depth 3,790 feet, initial production 100 bbls. per hour. Pine Petroleum Co.'s No. 7 Giles, top pay 3,664 feet, total depth 3,673 feet, initial production 45 bbls. per hour. Ray's No. 9 Wilson, top pay 3,636 feet, total depth 3,656 feet, initial production 75 bbls. per hour. Regent Oil Co.'s No. 7-B Harmon, top pay 3,773 feet, total depth 3,803 feet, initial production 80 bbls. per hour.

Retsal Oil Co.'s No. 7 Brown, top pay 3,715 feet, total depth 3,759 feet, initial production 40 bbls. per hour. Shell Petroleum Corp.'s No. 15-A Brooks, top pay 3,657 feet, total depth 3,714 feet, initial production 23 bbls. per hour; No. 17-A Brooks, top pay 3,655 feet, total depth 3,712 feet, initial production 35 bbls. per hour. Sonbar Oil Co.'s No. 12 Fenney, top pay 3,676 feet, total depth 3,714 feet, initial production 52 bbls. per hour. Standard Oil Co.'s No. 7 Thompson, top pay 3,612 feet, total depth 3,628 feet, initial production 120 bbls. per hour. Stroube and Collins' No. 10 Pinkston, top pay 3,645 feet, total depth 3,650 feet, initial production 35 bbls. in 30 minutes. Sutton and Hawkins' No. 2 Thompson, top pay 3,610 feet, total depth 3,668 feet, initial production 20 bbls. per hour, pumping.

Texas Co.'s No. 10 Price, top pay 3,598 feet, total depth 3,635 feet, initial production 40 bbls. per hour. Tide Water Oil Co.'s No. 2-B Thompson, top pay 3,646 feet, total depth 3,710 feet, initial production 12 bbls. in 15 minutes through 1-inch choke. Tripps-Mead Oil Corp.'s No. 5 Thompson, top pay 3,780 feet, total depth 3,808 feet, initial production 60 bbls. per hour. Venable and McClanahan's No. 27 Birdwell, top pay 3,597 feet, total depth 3,626 feet, initial production 80 bbls. per hour; No. 33 Birdwell, top pay 3,600 feet, total depth 3,620 feet, initial production 100 bbls. per hour. Ward Oil Co.'s No. 29 Thrash, top pay 3,775 feet, total depth 3,780 feet, initial production 91 bbls. per hour.

**Smith County**

Petroleum Pipe Line Storage Co.'s No. 2 Arterberry, top pay 3,828 feet, total depth 3,829 feet, initial production 20 bbls. per day. Magnolia Petroleum Co.'s No. 30 Wright, top pay 3,669 feet, total depth 3,675 feet, initial production 24 bbls. in 15 minutes. Markham's No. 6 Cook, top pay 3,746 feet, total depth 3,760 feet, initial production 50 bbls. per hour. Reeves, receiver's No. 12 Wolford, top pay 3,718 feet, total depth 3,723 feet, initial production 100 bbls. per hour. Sessions Oil Co.'s No. 9 Stone, top pay 3,812 feet, total depth 3,814 feet, initial production 20 bbls. in 20 minutes. Sinclair Prairie Oil Co.'s No. 39-A Mayfield, top pay 3,845 feet, total depth 3,847 feet, initial production 75 bbls. per hour; No. 10 Wilson, top pay 3,756 feet, total depth 3,759 feet, initial production 60 bbls. per hour. Stewart and Eagin's No. 2 Bateman, top pay 3,771 feet, total depth 3,772 feet, initial production 40 bbls. per hour. Sun Oil Co.'s No. 26 Knight, top pay 3,620 feet, total depth 3,635 feet, initial production 28 bbls. in 30 minutes; No. 13-B Pace, top pay 3,807 feet, total depth 3,808 feet, initial production 18 bbls. in 30 minutes.

**Upshur County**

Black's No. 4 Burroughs, top pay 3,707 feet, total depth 3,712 feet, initial production 30 bbls. per hour. Cabot Carbon Co.'s No. 12 Graves, top pay 3,623 feet, total depth 3,628 feet, initial production 72 bbls. per hour through 1-inch choke. Eastern Texas Petroleum Co.'s No. 6 Flett, top pay 3,648 feet, total depth 3,650 feet, initial production 20 bbls. per hour. Florence and others' No. 1 Edward Church, top pay 3,626 feet, total depth 3,650 feet, initial production 20 bbls. in 15 minutes. Lyon and Neeley's No. 3 O'Byrne, top pay 3,678 feet, total depth 3,694 feet, initial production 35 bbls. in 30 minutes. Magnolia Petroleum Co.'s No. 9 Doby, top pay 3,770 feet, total depth 3,777 feet, initial production 80 bbls. per hour. Murphy and others' No. 1 Sanders, top pay 3,650 feet, total depth 3,676 feet, initial production 20 bbls. in 15 minutes. Stroube and Stroube's No. 20 Mackey, top pay 3,633 feet, total depth 3,636 feet, initial production 20 bbls. in 30 minutes. Sun Oil Co.'s No. 4 Johnson, top pay 3,622 feet, total depth 3,623 feet, initial production 28 bbls. per hour.

## MISCELLANEOUS COMPLETIONS

**Anderson County—Camp Hill Area**

Gulf Production Co.'s No. 2 Robinson, dry and abandoned at 5,276 feet, elevation 635 feet.

**Angelina County**

Hunter Co., Inc.'s No. 1 Long Bell Lumber Co., elevation 328 feet, dry and abandoned at 2,517 feet.

**Cherokee County—Rusk Pool**

Woods and others' No. 3 New Birmingham Development Co., total depth 5,179 feet, initial production 328 bbls. the first 24 hours through three-sixteenths inch choke, 42 degrees gravity.

**Ellis County**

Murphee and Coker's No. 1 Coker, dry and abandoned at 1,610 feet, elevation 333 feet.

**Limestone County**

C. F. Carter's No. 1 Dean, dry and abandoned at 1,758 feet.

**Van Zandt County**

Peden and Olson's No. 5 Brannon, elevation 454 feet, dry and abandoned at 1,323 feet.

## West Texas Fields

(Continued from Page 41)

It was then shut down over night and filled within 500 feet of the top of the tubing. It was then swabbed down to 1,500 feet again and showed 5 per cent oil and the water began to taste salty on the morning of June 3.

Oklahoma independents and some East Texas independents have been doing the majority of leasing in the surrounding area, extending their operations east into Hardeman County in the direction of Flannery and others' No. 1 J. M. Williams, in Section 151, Block H, W.&N.W. Survey, about 20 miles distant. Major companies have just been standing by waiting for developments on the well before they step in and start purchasing.

The test has made a couple of 20-bbl. heads, the oil testing 42 gravity, which leads many to believe that it will make a small producer. If the salty report is proven true the company will probably plug it back a few feet to prevent an influx of such water and a test made above the plug.

Ragardless of a successful outcome of this test Larkine and Warr are to sink a test on the Williams lands, at the common corners of Sections 507, 483, 484 and 508, in the same block and survey, and have rig up to commence drilling as soon as possible. This test will be about 3 miles to the northwest of the Mollie Low exciter. Another test is also proposed for the area but no location has been reported for same as yet.

There were 20 locations staked in the district this week while only nine tests were completed, all proving producers but one, which was in Wheeler County.

## WICHITA FALLS COMPLETIONS

**Archer County**

L. T. Burns' No. 1 W. D. Pace, total depth 1,256 feet, dry and abandoned; No. 1-A J. J. Perkins, total depth 1,045 feet, dry and abandoned. Cullum and Sinclair Prairie's No. 14 Falls (Scranton lease), total depth 1,112 feet, dry and abandoned. C. S. Davis and others' No. 1 G. M. Benson, total depth 903 feet, dry and abandoned. F.H.E. Oil Corp.'s No. 10 W. T. Richardson, total depth 1,450 feet, dry and abandoned; No. 12 W. T. Richardson, top pay 1,448 feet, total depth 1,451 feet, initial production 175 bbls. per day, flowing. Florey Oil Co.'s No. 1-B F. Brezina and others, total depth 1,534 feet, dry and abandoned. Grace and Woods and others' No. 1 J. M. Powell, total depth 1,504 feet, dry and abandoned. W. B. Hamilton's No. 2-A Longley estate, top pay 1,139 feet, total depth 1,149 feet, initial production 80 bbls. per day; No. 28 W. Pace, top pay 1,137 feet, total depth 1,149½ feet, initial production 100 bbls. per day.

Huggins Oil Co.'s No. 3 Walter Ford, top pay 996 feet, total depth 1,001 feet, initial production 15 bbls. per day. Kouri and Hooker's No. 1 Mrs. J. P. Montgomery, total depth 1,118 feet, dry and abandoned. N. H. Martin & Son and others' No. 1 J. H. Turberville, total depth 1,488 feet, dry and abandoned. Perkins and Cullum's No. 174 Falls, top pay 1,131 feet, total depth 1,158 feet, initial production 50 bbls. per day; No. 177 Falls, top pay 1,183 feet, total depth 1,203 feet, initial production estimated 75 bbls. per day. Petroleum Producers' No. 8-E J. T. Richardson, top pay 1,256 feet, total depth 1,261 feet, initial production 10 bbls. per day. Shappell Oil Co.'s No. 10 J. L. Jackson, total depth 2,593 feet, dry and abandoned.

**Baylor County**

Consolidated and Petroleum Producers' No. 5-D W. H. Portwood, top pay 1,386 feet, total depth 1,409 feet, initial production 100 bbls. per day. Ray and Staniforth's No. 4-A W. H. Portwood, top pay 1,375 feet, total depth 1,384 feet, initial production 250 bbls. per day.

**Clay County**

Taylor and Wagner's No. 1 George Myers, total depth 400 feet, dry and abandoned.

**Cooke County**

Bridwell Oil Co.'s No. 1 J. G. Coffee, total depth 2,049 feet, dry and abandoned; No. 1 J. F. Flusche, total depth 1,788 feet, dry and abandoned. Hess and Hutton's No. 2 F. Trubenbach, total depth 1,522 feet, dry and abandoned. Kewanee Oil & Gas Co.'s No. 22-A R. J. Timmis, top pay 1,347 feet, total depth 1,555 feet, initial production 35 bbls. of oil and 35 bbls. of water per day. R. A. Moore and others' No. 1 J. C. Whaley, total depth 415 feet, dry and abandoned. Texas Co.'s No. 1 Murer, top pay 731 feet, total depth 767 feet, plugged back to 755 feet, initial production 54 bbls. in 12 hours. United Producers Co.'s No. 1 S. B. Meadors, total depth 1,806 feet, dry and abandoned.

**Jack County**

Bissey and others' No. 3 C. J. Lewis, total depth 304 feet, dry and abandoned.

**Throckmorton County**

Falls Production Co.'s No. 9 M. K. Graham, top pay 3,166 feet, total depth 3,169 feet, initial production 35 bbls. per day flowing through tubing. Humble Oil & Refining Co.'s No. 3-A J. T. Davis, total depth 615 feet, dry and abandoned.

**Montague County**

Continental Oil Co.'s No. 7 J. W. Law-

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ler, total depth 1,787 feet, dry and abandoned. Continental and Bridwell's No. 10 H. C. McGaughey, top pay 1,789 feet, total depth 1,796 feet, plugged back to 1,793 feet, initial production 12½ bbls. of oil and 16½ bbls. of water per day pumping.

**Wichita County**

Bridwell Oil Co.'s No. 1 L. P. Douglas, top pay 1,957 feet, total depth 1,959 feet, initial production 52 bbls. of oil and 6 bbls. of water in 24 hours. Golding and Cochran's No. 18-C Waggoner Brothers, top pay 1,423 feet, total depth 1,435½ feet, initial production 16 bbls. of oil and 3 bbls. of water per day. Horwitz and Oldham's No. 3 D. E. Hooks, top pay 1,218 feet, total depth 1,223 feet, initial production 73 bbls. per day pumping. Magnolia Petroleum Co.'s No. 10 L. P. Douglas (old well deepened, formerly produced from sand 1,032-55 feet), total depth 2,016 feet, dry and abandoned. J. S. Smith's No. 3 C. Birk, total depth 470 feet, dry and abandoned; No. 29 C. Birk, top pay 275 feet, total depth 283 feet, initial production 3 bbls. per day. Waggoner Estate's No. 5-X Waggoner Estate, top pay 1,972 feet, total depth 1,982 feet, initial production 15 bbls. per day.

**Wilbarger County**

Hegralle Oil Co.'s No. 13-A Waggoner Estate, top pay 1,868 feet, total depth 1,872 feet, initial production 250 bbls. per day. John O'Neal's No. 1-B Waggoner Estate, top pay 532 feet, total depth 543 feet, initial production 7 bbls. per day.

**Young County**

B. C. Gilmore and others' No. 1 G. P. Stewart, total depth 567 feet, dry and abandoned. L. G. Hawkins and others' No. 1 J. M. Kirkland, top pay 676 feet, total depth 689 feet, initial production 75 bbls. per day. Holbrook and Woods', No. 9 S. E. Watson, top pay 614 feet, total depth 752 feet, initial production 7 bbls. per day. Martin and Hines' No. 2 J. W. Bullock, top pay 598 feet, total depth 605 feet, plugged back to 604 feet, initial production 15 bbls. in 24 hours. Petroleum Producers' No. 1 J. B. Marrs, total depth 860 feet, dry and abandoned. Charles Knox and others' No. 1 Mrs. E. Taylor, top pay 2,695 feet, total depth 2,718 feet, initial production 125 bbls. per day.

## WEST TEXAS COMPLETIONS

**Culberson County**

Nelwood Drilling Co.'s No. 1 Hall, dry and abandoned at 200 feet.

**Ector County**

Amerada Petroleum Corp.'s No. 1-A Connell, top pay 3,497 feet, total depth 3,628 feet, shot with 195 quarts from 3,471-3,606 feet, treated and shot with 200 quarts from 3,494-3,628 feet, initial production 205 bbls. in 19 hours' pumping. Barnsdall Oil Co.'s No. 2 Smith, elevation 3,064 feet, dry and abandoned at 4,381 feet.

**Glasscock County**

Simms Oil Co.'s No. 7-A Coffee, top pay 2,014 feet, total depth 2,126 feet, initial production 20 bbls. per hour, pumping.

**Howard County**

Slagel's No. 1 Foster, top pay 2,604 feet, total depth 3,013 feet, elevation 2,367 feet, initial production 48 bbls. per day, pumping. Bond Drilling Co.'s No. 2 Rhotan, top pay 2,785 feet, total depth 2,915 feet, initial production 607 bbls. per day, pumping. Humble Oil & Refining Co.'s No. 11 Settles, top pay 2,003 feet, total depth 2,440 feet, initial production 43 bbls. per hour, pumping.

**Pecos County**

Taylor-Link Oil Co.'s No. 15 University, top pay 1,645 feet, total depth 1,648 feet, initial production 110 bbls., pumping.

**Sutton County**

Teas' No. 1 Mower, dry and abandoned at 4,930 feet, elevation 2,249 feet.

**Jones County**

Condor Petroleum Co.'s No. 4 Sayles, top pay 1,901 feet, total depth 1,911 feet, initial production 308 bbls., pumping. Sandyridge Oil Corp.'s No. 1 Jones, top pay 1,928 feet, total depth 1,937 feet, initial production 88 bbls., flowing and pumping.

**Upton County**

Texas Pacific Coal & Oil Co.'s No. 2-E Lane, top pay 2,157 feet, total depth 2,295 feet, acidized, initial production 213 bbls., pumping. Amerada Petroleum Corp.'s No. 1 Lane, top pay 2,095 feet, total depth 2,195 feet, acidized, initial production 311 bbls. in 22 hours' pumping.

**Ward County**

Gulf Production Co.'s No. 41 Hutchins, top pay 2,640 feet, total depth 2,791 feet, shot with 180 quarts from 2,780-2,601 feet, with 100 quarts from 2,680-2,711 feet, and with 80 quarts from 2,-681-2,701 feet, initial production 518 bbls. per day. California Co.'s No. 31 Durgin, top pay 2,446 feet, total depth 2,528 feet, shot with 330 quarts from 2,400-2,528 feet, initial production 940 bbls. per day.

**Winkler County**

Sayre Oil Co.'s No. 1-A Daugherty, top pay 2,985 feet, total depth 3,004 feet, initial production 824 bbls. per day.

## PANHANDLE COMPLETIONS

**Gray County**

Champlin Oil & Refining Co.'s No. 1 Taylor, total depth 3,064 feet, shot 45 quarts from 2,345-65 feet, initial production 350,000 feet gas. Empire Gas & Fuel Co.'s No. 5 Culler, top pay 3,197-3,264 feet, initial production 295 bbls., pumping. I.T.I. Oil Co.'s No. 8 Smith, top pay 3,165 ft.; total depth 3,278 feet, shot 370 quarts from 3,193-3,275 feet, initial production 338 bbls., pumping. Mazda Oil Co.'s No. 6 Combs-Worley, top pay 2,907 feet, total depth 2,995 feet, initial production 1,113 bbls. per day on gas lift. Mordyan Oil & Gas Co.'s No. 4 Davis, top pay 2,753 feet, total depth 2,819 feet, initial production 1,000 bbls. per day on gas lift. Skelly Oil Co.'s No. 26 East Schaffer, top pay 3,180 feet, total depth 3,314 feet, shot 640 quarts from 3,191-3,308 feet, initial production 574 bbls. pumping. Wilcox Oil & Gas Co.'s No. 36 Combs-Worley, top pay 2,888 feet, total depth 3,036 feet, shot 390 quarts from 2,893-3,035 feet, initial production 118 bbls. a day, pumping.

**Hutchinson County**

Wasson, Trustee's No. 5 Watkins, top pay 2,921 feet, total depth 3,005 feet, shot 450 quarts from 2,912-3,005 feet, initial production 351 bbls. per day, pumping.

**Wheeler County**

Johnson and Barnett's No. 1 Pryor, dry and abandoned 2,303 feet, show gas 2,000 feet, show oil and gas 2,095-2,100 feet.

## West Texas Wildcats

(Continued from Page 41)

**CULBERSON COUNTY**

Anderson-Prichard Oil Corp., Magnolia Pet. Co. et al's No. 1 Borders, 1,255 ft. N and 2,305 ft. from W. Sec. 34, Blk. 69, P.S.L. Sur.
Straightened crooked hole 1,645 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur.
S.D. 2,137 ft.

**DAWSON COUNTY**

Adams & Turner's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.
Cleaning out 4,660 ft.

O. F. Dickinson, trustee's No. 1 C. H. Doaks, 368 ft. from S and 330 ft. from E of SW cor., Sec. 4, Blk. H, E.L. Ry. Co. Sur.
S.D. 155 ft.; new hole.

**ECTOR COUNTY**

Atlantic Oil Prod. Co.'s No. 1 T. P. Land Trust, 440 ft. from N and W of SE Sec. 11, Blk. 43, Twp. 1s, T.&P. Sur.
T.D. 4,391 ft.; plugged back to 4,355 ft.; swabbed 15 bbls. in 4 hrs., 25 per cent water.

Continental Oil Co.'s No. 1 Wight, 2,200 ft. from S and W, Sec. 21, Blk. 43, Twp. 1s, T.&P. Sur.
Location.

Empire Gas & Fuel Co.'s No. 1 Cummins, 440 ft. from S and E, Sec. 10, Blk. 45, Twp. 1s, T.&P. Sur.
Drlg. 4,100 ft.; hole loaded.

Eppenauer Drlg. Co. et al No. 1 Wight, 440 ft. from N and W of NE ¼ Sec. 22, Blk. 43, Twp. 1s, T.&P. Sur.
Location.

International Pet. Corp.'s No. 1 Cowden, 660 ft. from S and E, Sec. 25, Blk. 44, Twp. 2s, T.&P. Sur.
T.P. 4,147 ft.; cleaning out 4,330 ft.

Landreth Prod. Co.'s No. 1 Blakeney, 440 ft. from N and E, Sec. 28, Blk. 43, Twp. 1s, T.&P. Sur.
Elev. 3,066 ft.; rigged up standard tools.

Landreth Prod. Co.'s No. 1-B O. B. Holt, 660 ft. from N and 1,980 ft. from E lines of Sec. 19, Blk. "A," P.S.L. Sur.
Drlg. 4,102 ft.

Landreth Prod. Co.'s No. 1 Cowden Heirs, 440 ft. from S and W, Sec. 18, Blk. 44, Twp. 1n, T.&P. Sur.
Top lime 3,708 ft.; fishing 4,165 ft.

Landreth Prod. Co.'s No. 2 Scharbauer, 2,200 ft. from N and 440 ft. from W, Sec. 13, Blk. A, P.S.L. Sur.
Elev. 3,142 ft.; drlg. 2,790 ft.

C. L. Peters' No. 1 Connell, 330 ft. from N and E lines of NW of Sec. 12, Blk. B-16, P.S.L. Sur.
Drlg. 2,281 ft.

Phillips Pet. Co. and Pure's No. 1 C. Cowden, 2,200 ft. from N and 440 ft. from W, Sec. 14, Blk. 44, Twp. 1s, T.&P. Sur.
Rig.

Phillips Pet. Co. and Pure Oil Co.'s No. 2 C. Cowden, 440 ft. from S and W, Sec. 23, Blk. 44, Twp. 1s, T.&P. Sur.
Location.

**EL PASO COUNTY**

Tri-State Oil Co.'s No. 1 Kinkel, 190 ft. from N and 550 ft. from E, Sec. 237, A.T.&S.F. Sur.
S.D. 225 ft.; setting csg.

**FISHER COUNTY**

George Callihan et al's No. 1 Herring, 2,310 ft. from S and 330 ft. from W lines of Sec. 192, Blk. 1, B.B.B.&C. Sur.
Elev. 1,804 ft.; T.D. 2,900 ft.; set csg.

Russ Petroleum Co.'s No. 1 Reynolds, 550 ft. from S and 420 ft. from E of SW ¼ Sec. 3, Blk. R, W. E. Richardson Sur.
Elev. 1,832 ft.; drlg. 2,282 ft.

Tide Water Oil Co. et al's No. 1 W. E. Hittson et al, 1,320 ft. from N and 660 ft. from W. Sec. 177, Blk. 2, H.&T.C. Sur.
Elev. 1,871 ft.; drlg. 1,866 ft.

**GARZA COUNTY**

N. L. Richards' No. 1 Sullivan, 330 ft. from N and W. Sec. 3, Blk. 5, K. Aycock Sur.
Elev. 2,534 ft.; T.D. 2,940 ft.; 400 ft. oil in hole; to run tubing and test.

**GLASSCOCK COUNTY**

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 22, Blk. 34, Twp. 2s, T.&P. Sur.
Topped lime 9,471 ft.; show oil and gas 9,484-9,520 ft.; increase oil 9,594-9,600 ft. and 9,633-55 ft.; T.D. 9,946 ft.; opened this week and made one 50-bbl. head into slush pit; to deepen.

**HOWARD COUNTY**

Clay Bros. & White's No. 1 Read, 330 ft. from S and 1,650 ft. from W, Sec. 46, Blk. 30, Twp. 1n, T.&P. Sur.
T.P. 2,635 ft.; T.D. 2,782 ft.; cleaning out.

John I. Moore et al's No. 1 Snyder, 330 ft. from S and W, Sec. 28, Blk. 30, Twp. 1s, T.&P. Sur.
Elev. 2,302 ft.; drlg. 810 ft.

Iron Mountain Oil Co.'s No. 6 Reed, 330 ft. from S and W lines of Sec. 46, Blk. 30, Twp. 1n, T.&P. Sur.
T.D. 2,794 ft.; cleaning out.

**JEFF DAVIS COUNTY**

C. M. Joiner's No. 1 Jones & Coffield, 770 ft. from N and 1,322 ft. from E. Sec. 8, Blk. 3, H.&T.C. Sur.
S.D. 1,105 ft.

**JONES COUNTY**

Campbell et al's No. 1 Rowell, in E half of W half, Sec. 6, T.&P. Sur.
Drlg. 976 ft.

Campbell et al's No. 1 Enevill, 1,400 ft. from N and 270 ft. from W, Sec. 2, M.E.&P. Sur., ¼ mile S of Anson.
T.D. 2,400 ft.; underreaming.

Owen et al's No. 1 Johnson & Dunwoody, 3,750 ft. from S and 330 ft. from W, Sec. 6, Blk. 17, T.&P. Sur.
Spudded and S.D.

Ungren & Frazier et al's No. 1 Steele, 1,450 ft. from S and 200 ft. from W lines of Sec. 8, Blk. 10, C. Allen Sur.
T.D. 1,716 ft.; new machine.

Ungren & Frazier's No. 1 King Ranch, 200 ft. from N and E of NW half, Blk. 5, M. Bueno Sur.
Drlg. 1,163 ft.

**KIMBLE COUNTY**

Wilcox Oil & Gas Co.'s No. 1 J. Patterson, 200 ft. from N and E, Sec. 1, D.&P.R.R. Sur.
Drlg. 95 ft.

**LOVING COUNTY**

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft. from N and 1,650 ft. from W, Sec. 12, Blk. 57, Twp. 1, T.&P. Sur.
S.D. 2,170 ft.

Mason Oil Co.'s No. 1 Kyle, 1,980 ft. from S and E, Sec. 22, Blk. 55, Twp. 1, T.&P. Sur.
Fishing 2,000 ft.

**LYNN COUNTY**

Hart Oil Co.'s No. 1 Edwards, 220 ft. from N and 200 ft. from W of SE Sec. 29, L.&S.V. Sur.
Elev. 3,112 ft.; T.D. 4,817 ft.; drlg. new hole at 2,922 ft.

**MARTIN COUNTY**

Wright & Scott's No. 1 Flannigan, 330 ft. N and E, Sec. 22, Blk. 37, Twp. 1s, T.&P. Sur.
S.D. 100 ft. for csg.

**MITCHELL COUNTY**

Sawtell & Grueber's No. 1 Morrison.
Drlg. 1,322 ft.

Texas Co.'s No. 1 Terry, 300 ft. from S and 1,650 ft. from E of W 485 acres, Sec. 62, Blk. 29, W.&N.W. Sur.
Machine.

**McCULLOCH COUNTY**

Honea et al's No. 1 Cox, 450 ft. from S and 150 ft. from E, David Pope Sur.
S.D. 846 ft.

Skaggs & Brewer's No. 1 Dunn, 190 ft. from S and 570 ft. from E. Sec. 951, T. L. Hartig Sur.
S.D. 883 ft.

**PECOS COUNTY**

Adams et al's No. 2 Masterson, 1,630 ft. from SE and 330 ft. from SW, Sec. 104, Blk. 10, H.&G.N. Sur.
S.D. 527 ft.

Cardinal Oil Co.'s No. 1 White & Baker, 150 ft. S and E lines of "E" lease, Sec. 40, Blk. 194, G.C.&S.F. Sur.
Drlg. 1,428 ft.

Gulf Prod. Co.'s No. 6 White & Baker, 330 ft. from N and W, Sec. 94, Blk. 194.
Drlg. 357 ft.

C. R. Richards' No. 4 Courtney, 920 ft. from N and W, Sec. 78, Blk. OW, 360 ft. S of No. 2.
T.D. 220 ft.; cleaning out.

Samwan Oil Co.'s No. 2 Masterson, 330 ft. from W and 990 ft. from S lines of Sec. 104, Blk. 10, H.&G.N. Sur.
Drlg. 150 ft.

Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 27, Blk. 40, Twp. 9, T.&P. Sur.
T.D. 2,310 ft.; running new pipe.

**REAGAN COUNTY**

Byrd-Frost Inc.'s No. 1 Boyd, 1,320 ft. from S and E of Sec. 6, Blk. E, L.V.S.&V. Sur.
S.D. 3,334 ft.

Dobbs No. 1 Friend, 2,310 ft. from S and 660 ft. from W of Blk. 3, Wm. Allen Sur., 3 or 4 miles S of Big Lake.
S.D. 2,465 ft.; show oil 2,325-30 ft.; increase 2,385 ft.; to acidize.

John Emch's No. 1 E. V. Belcher, 467 ft. from N and 1,400 ft. from E, Sec. 4, Blk. 4½, G.C.&S.F. Sur.
Drlg. 2,410 ft.

Skelly Oil Co.'s No. 1-D H. S. Grayson, 1,980 ft. from N line and 660 ft. from W line of Sec. 33, Blk. 8, University Land Sur.
S.D. 9,967 ft.; bridged back to 3,100 ft.; testing.

**REEVES COUNTY**

Dunigan's No. 1 Davis, 330 ft. from N and W, Sec. 7, Blk. 58, P.S.L. Sur.
Location.

Herbert Oil Co.'s No. 1 Williams & Walker, 5,280 ft. from S and 1,320 ft. from E, Sec. 17, Blk. 6, H.&G.N. Sur.
T.D. 2,985 ft.; to acidize.

K. Slack et al's No. 1 Reeves, C NW ¼ Sec. 20, Blk. 56, P.S.L. Sur., 22 mi. N of Toyah.
Surface pipe 336 ft.; drlg. ahead.

Washington Oil Co.'s No. 1 J. M. Radford Grocery Co., 2,640 ft. from S and 340 ft. from E, Sec. 39, Blk. 56, P.S.L. Sur.
Spudded.

**RUNNELS COUNTY**

Dennis et al's No. 1 Wash, 550 ft. from N and 560 ft. from E of W half, Sec. 123, E.T.R.R. Sur.
Drlg. 25 ft.

Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 3,476 ft. from W line of survey, Willett Holmes Sur. No. 106.
S.D. 2,507 ft.

R. Wells' No. 1 James, 396 ft. from N and 330 ft. from E of James tract in Sec. 16, D. Diaz Sur.
Drlg. 1,325 ft.

Wolverton's No. 1 Willingham, 200 ft. from river and in C of Wilhelm-Wolfgang Sur. No. 425, 1½ miles SE of Ballinger.
Drlg. 270 ft.

**SCHLEICHER COUNTY**

John M. Cooper et al's No. 1 Bert Page, 1,290 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur.
Drlg. 6,087 ft.

W. C. Proctor et al's No. 1 Judkins & Spencer, C SW¼ Sec. 4, Blk. V.28.
Drlg. 312 ft.

**SCURRY COUNTY**

M. L. Goos et al's No. 1 J. E. Murphy, 330 ft. from N and 1,650 ft. from E, Sec. 114, Blk. 97, H.&T.C. Sur.
T.D. 770 ft.; cleaning out.

Magnolia Pet. Co.'s No. 1 J. W. Mooar, 1,650 ft. from N and 990 ft. from E, Sec. 342, Blk. 97, H.&T.C. Sur.
Rigged up standard tools.

McLaughlin's No. 1 Allen, 1,321 ft. from N and 1,338 ft. from E, Sec. 298, Blk. 97.
Drlg. 2,645 ft.

**STONEWALL COUNTY**

Barnsdall Oil Co.'s No. 1 S. Young, 350 ft. from N and E, Sec. 26, Austin & Williams Sur. 349.
Drlg. 1,840 ft.

**SUTTON COUNTY**

Paul C. Teas' No. 1 G. S. Allison, 660 ft. from S and W, Sec. 49, Blk. A, G.W.T.&P. Sur.
Location.

**TAYLOR COUNTY**

Anderson et al's No. 1 J. C. High, 2,310 ft. from N and 990 ft. from E, Sec. 8, L.&L. Sur.
Machine.

Skaggs & Brewer's No. 1 McClure, 330 ft. from N and E S half SW Sec. 8, L.A.L. Sur.
Drlg. 1,770 ft.

**TOM GREEN COUNTY**

Jacobs et al's No. 2 DeLong, 150 ft. from N and 450 ft. from E, James Webb Sur. No. 83.
Drlg. 565 ft.

**UPTON COUNTY**

Baldridge Oil Co.'s No. 1 S. Peck, 440 ft. from S and E, Sec. 29, Blk. 41, Twp. 4s, T.&P. Sur.
Elev. 2,890 ft.; top lime 4,763 ft.; S.D. 4,813 ft.

T.P. Coal & Oil Co.'s No. 1 Cordova Union Land, 2,406 ft. from E and 330 ft. from N, Sec. 33, Blk. 1.
Drlg. 2,247 ft.

Gulf Prod. Co.'s No. 102 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur.
Show oil 12,710-20 ft.; S.D. 12,786 ft.; ran Schlumberger; to plug back and test different showings.

Humble Oil & Ref. Co.'s No. 1 Pollock, C of NW, Sec. 4, Blk. M.
Drlg. 5,980 ft.
Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,900 ft. from E. Sec. 4, G.C.&S.F. Sur.
T.D. 2,080 ft.; testing.

**WARD COUNTY**

Atlantic O. P. Co.'s No. 2 Miller, 504 ft. from NE and 330 ft. from SE, W. F. Russell No. 3 Sur.
S.D. 2,585 ft.
Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 37, Blk. 34, H.&T.C. Sur.
Set csg. 2,256 ft.
Bradford et al's No. 1 E. R. Allen, 660 ft. from NW line and 551 ft. from NE line, Sec. 11, Blk. 5, H.&T.C. Sur.
T.D. 1,520 ft.; shut down.
Caprito's No. 1 Hardage & Wilson, 2,310 ft. from NE and 990 ft. from SE, Sec. 11, Blk. 34, H.&T.C. Sur.
Machine rigged up.
Eastland Oil Co.'s No. 1 C. D. Mason, 330 ft. from SW and SE, Sec. 14, Blk. 34.
T.D. 140 ft.; set csg.
Gulf Prod. Co.'s No. 58 O'Brien, 330 ft. from E and 1,650 ft. from S, Sec. 18, Blk. F.
Drlg. 755 ft.
Gulf Prod. Co.'s No. 57 O'Brien, 2,310 ft. from S and 330 ft. from E, Sec. 18, Blk. F.
Set csg. 2,565 ft.
Magnolia Pet. Co.'s No. 2 Sealy Estate, 2,310 ft. from S and 330 ft. from W. Sec. 43, Blk. F.
Drlg. 2,180 ft.
Sageland Oil Corp.'s No. 2 Pure-Bennett, 1,650 ft. from NW and 2,310 ft. from SW S.D. 220 ft.
Jerry Sines' No. 1 Brown, 330 ft. from NW and NE. Sec. 13, Blk. 5, H.&T.C. Sur.
T.D. 3,148 ft.; swabbing.
West Texas O. & R. Co.'s No. 1-C University, 330 ft. from N and E, Sec. 6, Blk. 16. S.D. 2,583 ft.

**WINKLER COUNTY**

Barnsdall Oil Co.'s No. 1 Brown & Altman, 2,310 ft. from S and E, Sec. 6, Blk. B-5.
Elev. 2,844 ft.; drlg. 2,575 ft.
Emperor Oil Co.'s No. 1 Halley, 1,650 ft. from S and 330 ft. from E, Sec. 12, Blk. B-12.
Elev. 2,764 ft.; drlg. 910 ft.
Fox & Butler's No. 1 Brown & Altman, 2,310 ft. from S and 1,650 ft. from E, Sec. 6, Blk. B-5.
Set csg. 415 ft.
Green Prod. Co.'s No. 1 J. F. Cross, 330 ft. from N and 2,310 ft. from W, Sec. 4, Blk. B-10, P.S.L. Sur.
Shut down.
Gulf Prod. Co.'s No. 1 Keystone Cattle Co., NE of NW, Sec. 10, Blk. B-3, P.S.L. Sur.
Elev. 2,942 ft.; drlg. 1,975 ft.
Gulf Prod. Co.'s No. 2 Keystone Cattle Co., NW cor. Sec. 17, Blk. B-2.
Elev. 2,951 ft.; drlg. 720 ft.
Gulf Prod. Co.'s No. 3 Keystone Cattle Co., 330 ft. from N and W of NE ¼ Sec. 11, Blk. B-3.
Rotary.
Gulf Prod. Co.'s No. 4 Keystone Cattle Co., 330 ft. from N and E, Sec. 20, Blk. B-3.
Rigged up rotary.
Gulf Prod. Co.'s No. 5 Keystone Cattle Co., 330 ft. from N and W of SW¼ Sec. 6, Blk. B-2.
Rigged up rotary.
Gulf Prod. Co.'s No. 6 Keystone Cattle Co., 330 ft. from N and W of NE¼ Sec. 16, Blk. B-2.
Rig.
Gulf Prod. Co.'s No. 7 Keystone Cattle Co., 330 ft. from N and W of SW ¼ Sec. 14, Blk. B-2.
Cellar.
Gulf Prod. Co.'s No. 8 Keystone Cattle Co., 330 ft. from S and W of Sec. 13, Blk. B-2.
Cellar.
Gulf Prod. Co.'s No. 9 Keystone Cattle Co., 330 ft. from S and W of Sec. 18, Blk. B-2.
Location.
Harry Adams' No. 2 Scarborough, 990 ft. from N line and 990 ft. from W line, Sec. 2, Blk. 77, P.S.L. Sur.
Location.
Humble Oil & Ref. Co.'s No. 2-A Walton 660 ft. from S and W, Sec. 48, Blk. 26.
Derrick.
J. C. Maxwell's No. 1 Brown & Altman, 2,310 ft. from N and 990 ft. from W, Sec. 6, Blk. B-5.
Elev. 2,844 ft.; drlg. 2,530 ft.; hole loaded.
Mid-Continent Pet. Corp.'s No. 2 Howe, 1,650 ft. from N and 330 ft. from W. Sec. 12, Blk. 26.
T.D. 2,989 ft.; T.P. 2,800 ft.
Richardson's No. 1 Walton, 1,010 ft. from S and 330 ft. from W. Sec. 1, Blk. B-3.
T.D. 2,947 ft.; est. 15,000,000 to 20,000,000 ft. gas; rigged up rotary.
Skelly Oil Co.'s No. 2 Halley, 1,320 ft. from N and 2,200 ft. from E, Sec. 25, Blk. B-11, P.S.L. Sur.
S.D. 3,090 ft.
Skelly Oil Co.'s No. 3 Halley, 2,200 ft. from N and 440 ft. from W, Sec. 16, Blk. B-11.
Derrick.
Sioux Oil Co.'s No. 1 Lowett, 330 ft. from N and E, Sec. 36, Blk. 26, P.S.L. Sur.
T.D. 2,607 ft.; preparing to deepen.
Sun Oil Co.'s No. 1 Halley, 2,200 ft. from N and 440 ft. from E, Sec. 24, Blk. B-12, P.S.L. Sur.
T.D. 3,035 ft.; cleaning out.
Texas Pacific Coal & Oil Co.'s No. 2 Daugherty, 1,650 ft. from S and 330 ft. from E, Sec. 2, Blk. 26, P.S.L. Survey.
Drlg. 3,000 ft.; made 100 bbls. in 24 hrs.
Weaver et al's No. 1 T. Morton, 330 ft. from S and E of N half, Sec. 11, Blk. B-12.
Drlg. 365 ft.

**YOAKUM COUNTY**

C. J. Davidson et al's No. 1 Bennett, 1,320 ft. from N and E, Sec. 678, John H. Gibson Sur.
S.D. 118 ft.; standard derrick.

## East Central Texas Wildcats

(Continued from Page 43)

Sur., but in F. Thweatt Sur., 3 miles SE of Greenville.
Dry 3,535 ft.
J. F. Morrissey & Co., Inc.'s No. 1 Fry, 543 ft. from N and 200 ft. from E of 146-ac. tract, 7 miles N of Commerce, C. Davis Sur.
Drlg. 1,112 ft.
H. G. Samson's No. 1 Phillips, 1,200 ft. E of Winan's No. 1 Phillips, University Lands Sur., 2 miles W of Commerce.
Elev. 522 ft.; S.D. 2,460 ft.

**KAUFMAN COUNTY**

Germany et al's No. 1 Clark, 951 ft. N and 1,000 ft. W of tract, S. Eden Sur.
T.D. 1,780 ft.
Murry & Emerson's No. 1 G. W. Martin, 1,660 ft. from W and 250 ft. from N of 140-ac. tract, from W. L. C. Butler Sur., 2 miles NE of Kemp.
S.D. 700 ft.
L. P. Kean's No. 1 J. B. Hunter, R. Sowell Sur., 300 ft. from SW and 150 ft. from SE of 50-ac. tract, 4 miles S of Terrell.
S.D. 3,400 ft.

**LEON COUNTY**

Killough & Tucker's No. 1 G. W. Lee, center of NE 10 acres of 230-ac. tract, J. Burleson Sur.
Drlg. 3,792 ft.
H. Williams et al's No. 1 Henry, 155 ft. from SW and 501 ft. from NW of 125-ac. tract, R. Rogers Sur., 2 miles E of Normangee.
Coring 2,180 ft.

**LIMESTONE COUNTY**

J. Edward Mills' No. 1 Hunt, 200 ft. from N, 350 ft. from W line 34.75-ac. tract, Israel Wood Sur., 3 miles NE of Kosse.
Drlg. 3,665 ft.
Doughtry et al's No. 1 S. Welch, 150 ft. from NW and 900 ft. from NE of 77.64-acre tract in A. Varilia Sur., 4 miles W of Groesbeck.
Top sand 2,940-51 ft.; S.D. 3,004 ft.; C.O.
Y. Rogers' No. 1 J. M. Tidwell, 330 ft. from S and E of 230-ac. tract, P. Varella Sur., 3 miles SW of Mexia.
Derrick.

**McLENNAN COUNTY**

Mahan et al's No. 1 Mann, 1,100 ft. W of Simms Oil Co.'s No. 1 Mann, Carlos Tampo Sur., W of Robertsonville.
S.D. 700 ft.

**NACOGDOCHES COUNTY**

Douglas Exploration Co.'s No. 1 Hayter, 1,687 ft. from S and 2,582 ft. from W lines of tract, Santos Coy Sur
Drlg. new hole at 3,035 ft.
Morrow et al's No. 1 C. B. Watkins, 150 ft. from N line and 330 ft. from NW lines of 160-ac. tract, 3 miles S of Caro, H. Y. Hailey Sur.
S.D. 4,170 ft.
Stebbinger & Baker, trustee's No. 1 Mrs. A. Mattauer, 408 ft. from W and 607 ft. from N of 440-ac. tract, R. Totin Sur., 4 miles SE of Cherino.
Derrick.

**NAVARRO COUNTY**

Bennett Brothers' No. 1 T. E. Stewart, 150 ft. from NE line of lease, 10 miles SW of Corsicana, Wm. R. Bowen Sur.
T.D. 1,186 ft.; S.D.
R. B. Codding et al's No. 1 Lela Kent, 450 ft. from S line and center of N and S lines of lease, 3 miles NE of Chatfield, C. B. Emmons Sur.
S.D. 1,340 ft.
W. J. Keeling et al's No. 1 J. F. Rushing 484 ft. from N line and 150 ft. from W line of 184-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
T.D. 2,881 ft.
McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-acre tract, 1 mile W of Dawson, William Moss Sur.
S.D. 1,182 ft.
E. M. Thomason & Co.'s No. 1 C. Morgan, 340 ft. from W and 520 ft. from N of 100-ac. tract, Wm. Haggard Sur., 1 mile SW of McGlothlin's No. 1 Dobbin.
Drlg. 612 ft.
Wiggins et al's No. 1 Donoho, 450 ft. from N and 1,101 ft. from E lines in John Couple Sur., SW of Corsicana.
S.D. 1,439 ft.

**RED RIVER COUNTY**

Joiner's No. 1 D. Rust, C. C. Wilborn Sur., 234 ft. N and 254 ft. W of most southerly SE cor. of Sur., just south of Avery.
Rig.

**RUSK COUNTY**

Ben Lamb's No. 1 H. Leath, 330 ft. out of NW cor. of 185-ac. tract in L. J. Dooley.
T.D. 4,740 ft.; P.B. to 4,710 ft.; bailing and showing oil.
Richardson's No. 1 Wood.
Top Pecan 3,419 ft.; drlg. 3,775 ft.

**SMITH COUNTY**

Cloud et al's No. 1 Dendall, 330 ft. from S and W of 55-ac. tract, J. Williams Sur., 3 miles E of Van Field.
S.D. 1,650 ft.
W. R. Harrison's No. 1 Rushing, J. Herring Sur. (O.W.D.D.).
T.D. 4,330 ft.; to sidetrack.
Sun and Hunt Prod. Co.'s No. 1 E. W. Judge, 330 ft. S and E of 55.5-ac. tract, 3½ miles SE of Tyler.
Material.

**TITUS COUNTY**

S. Rotondi's No. 1 Lillianstun, 1,200 ft. E from NW cor. of J. Bodt Sur. and 330 ft. N, but in W. H. Crawford Sur., 5 miles NE of Talco.
Elev. 301 ft.; derrick.

**UPSHUR COUNTY**

Humphries' No. 1 J. H. Brown, 330 ft. N and E of NW cor. of J. H. Brown's 100-ac. tract, R. Wyatt Sur., 2½ miles south of Ore City.
Drlg. 2,150 ft.

**VAN ZANDT COUNTY**

J. H. Foster et al's No. 1 Breucher, 330 ft. out of SE cor. of tract, D. Clapp Sur., 4 miles SE of Wills Point
T.D. 3,235 ft.; junked and skidding rig 70 ft. west.
J. Beren et al's No. 1 Bryant, 483 ft. N of same operator's dry hole, Nacogdoches County School Land Sur.
S.D. 1,325 ft.
Beren et al's No. 2 Palmer, 544 ft. from S and 686 ft. from E of 69.5-ac. tract, Nacogdoches County School Land.
T.D. 1,324 ft.; C.O.

**WOOD COUNTY**

Dean Bros.' No. 1 W. H. Finklea, 550 ft. W of W line of J. Hunt Sur., B. Anderson Sur., 2½ miles SW of Yantis.
Rigged up.

## Southwest Texas Wildcats

(Continued from Page 39)

S of Guadalupe River, 225-ac. tract, J. D. Clements Sur. No. 14.
Spudded.

**HIDALGO COUNTY**

Bluff Pet. Co.'s No. 1 Porcion Land Co., 330 ft. from N and E lines of NE 100 acres of S 500 acres of Share 14, Por. 49.
Drlg. 250 ft.
E. A. Davis' No. 1 Flores, 65 ft. from N line, 25 ft. from W line, Tract 312, Porcion 38.
Spudded.
Downey & Morton's No. 1 Daskom, 450 ft. from E line, 55 ft. from S line of Blk. 34, Por. 45.
Preparing to swab, 4,115 ft.
Nedler & Graham's No. 1 Oscar Daskam, center of Blk. 42, Porcion 45.
Derrick.
E. L. Smith's No. 1 A. Flores, Tract 250, Porcion 38, 1 mile NW Sam Fordyce Field.
Drlg. 4,500 ft.

**JIM HOGG COUNTY**

Darby Pet. Co.'s No. 1 Holbien, 330 ft. out of SW cor. of Lot 57, Sur. 5, Los Animas grant.
Drlg. 125 ft.
French Oil Co.'s No. 2 T. T. East, 330 ft. from NE and NW lines, Blk. 74, Subd. No. 2 Las Moritas grant.
Drlg. 2,060 ft.
Miller & Pippin's No. 1 Yeager, 527 ft. S line, 150 ft. E line of Blk. 6, Sur. 20.
Fishing 3,455 ft.
A. Edmiston's (Southwestern Dev. Synd.) (formerly John D. Norwood) No. 1 C. W. Hellen, 330 ft. N and W lines, NW¼ NW¼ Sur. 48.
Abd. 1,600 ft.
A. W. Phillips' No. 1 Allen, 660 ft. from S and E lines of Blk. 293, Pippin Subd. of the Randado grant.
Moving in material.

**JIM WELLS COUNTY**

Sunray Oil Co.'s (A. M. Hagan) No. 1 Robert Adams, 330 ft. N and E of SW cor. Sec. 10, M. Ruiz Sur.
Moving in rig.
Smith & Story's (Maer & Shira) No. 1 Schaefer, 1,320 ft. E of NW cor. center of Blk. 15, of subdivision of ranch.
Drlg. 4,760 ft.

**KARNES COUNTY**

Jim Kendrick's No. 1 Radford, J. Pointevent Sur. on the Seegter tract.
Spudded.
W. C. McBride's No. 1 Boultinghouse, 643 ft. from SE line, 618 ft. from SW line of J. S. Menefee Sur.
Moving in material.
H. A. Pagenkopg's No. 1 T. J. McAda, 330 ft. from NE and NW lines of Tract C, Martinez Sur.
Drlg. 6,050 ft.
Harry Sample's No. 1 Seeger, 330 ft. from W line, 330 ft. SW of road, J. Pointevent Sur.
Drlg. 1,500 ft.
R. G. Tonkin's No. 2 Henke, 3,670 ft. from SW cor., 330 ft. from W line (location changed).
Location site cleared and pits completed.

**KERR COUNTY**

Emerald Oil Co.'s (Meteor Oil Co.) (Edminton & Walker) No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439 of the H.E.W.T. Sur.
S.D. in lime 800 ft.
Jeff Love and Eastland Oil Co.'s No. 5-E Jeff Love, 1,500 ft. SE of No. 1 and 1,530 ft. from SE cor. and 300 ft. from N line of Sec. 1,591.
T.D. 5,625 ft.; porous lime; S.W. 5,622-25 ft.; S.D.

**KLEBERG COUNTY**

Parr & Ponder's No. 1 Sam Michalk et al, 5 miles SE Kingsville.
S.D. 1,050 ft.

**LASALLE COUNTY**

C. W. Benk's No. 1 Feliz, 1,300 ft. from S line, 300 ft. from E line of Sur. 47.
Abd. 2,100 ft.
Killingsworth Oil Co.'s No. 1 Yeager, Sur 94.
T.D. 2,612 ft.; ran Schlumberger test; sand 1,499-1,710 ft.; setting csg.

**LEE COUNTY**

Jas. E. Pederson's No. 1 Turner, 1,860 ft. from N line, 150 ft. from E line of tract, David Hudson Sur.
T.D. 6,560 ft.; P.B. to 6,150 ft.; preparing to perforate csg.
Scharbach & Stowe's No. 1 Robert Otto.
Sand 2,450 ft.; small show of oil.

**LIVE OAK COUNTY**

Orbit Drlg. Co.'s (Baugh & McMillan) No. 1 Walton & Campbell, 1,500 ft. NE line and SE line of D. R. Fant Sur.
S.D. 5,000 ft.
Henderson Coquat's No. 1 Reagan, McGloin Sur., E of Nueces River and S of Oakville.
Drlg. 1,085 ft.
Henderson Coquat's (Luling O. & G. Co.) No. 1 Rex, 330 ft. from SE and SW lines of 629-ac. tract, C of SW¼ of G.H.&H. Sur., Abst. 197, 3 miles S of Mileska.
Drlg. 5,910 ft.
Lefevre, Spice & Feltner's No. 1 Carter Inv. Co. (Chappa ranch), 330 ft. from SW cor. NE¼ of Sec. 299, Hooper & Wade Sur.
S.D. 1,800 ft.
J. O. Whittington's No. 1 Little, 1,320 ft. NE of S cor. of M. M. Shipp Sur., 330 ft. N of S line.
T.D. 5,758 ft.; testing upper sands.

**McMULLEN COUNTY**

John O. Gibson's No. 1 Mazur & McDowell, 330 ft. from N and W lines, Sec. 19, Blk. 4, H.T.&B. Sur.
Spudded.
J. O. Gibson's No. 1 G. C. West (Lowe), 150 ft. E line, 1,200 ft. S of NW cor. of Lot 1, Blk. 4, H.T.&B. Sur.
S.D. 465 ft.
Henderson Coquat's No. 1 Ezzell, midway N and S lines, 2,000 ft. from SE line, D. R. Fant Sur.
Set csg. 768 ft.; W.O.C.
Howard & Carpenter's No. 1 Jungman, 1,030 ft. from E line, 950 ft. from S line, Hely Sur.
T.D. 780 ft.; completing.
Chas. A. Hall's No. 1 B. C. Claunch, 368 ft. from N line, 160 ft. from E line of 25-ac. tract, Michael Haley Sur.
Location.
Loma Oil Co.'s No. 1 Dickinson, Sparks Sur., Lot 13.
Spudded.
Points et al's No. 1 Fahler, 432 ft. S line, 819 ft. E line of tract, Byrna pasture.
Drlg. 650 ft.
C. C. Shumway's No. 8 Shiner, 330 ft. out of NE cor. of SE¼ of Sec. 53, C. C. Shumway Subd.
Drlg. 1,020 ft.
Texio Oil Co.'s No. 1 (Ellen Atkinson) Hendricks, 330 ft. from S and W lines of 80-ac. tract, Martha J. Deen Sur., Sec. 13.
T.D. 2,207 ft.; I.P. 15 bbls. per hr.; ¾-in. choke; 240 lbs. pressure.

**MEDINA COUNTY**

Joe Dupree's No. 1 Batot, 258 ft. from E line, 957 ft. from N line, J. Ball Sur. No. 1,478.
Drlg. shale 410 ft.
O. L. Gates and H. W. Hill, Jr.'s No. 1 Odom, 800 ft. from W line, 600 ft. from N line of H. Castro Sur. 174.
Rigging up.
W. T. Shoemaker's No. 1 Noonan, 52.5 ft. S 2 deg. 20 ft. E of old well, Sec. 349, M. Simon Sur.
T.D. 450 ft.; hole caving; to move in rotary.

**REAL COUNTY**

H. J. Heartwell et al's No. 2 Mrs. M. S. Perry, 250 varas from NW line, 775 varas from SW line of A.B.&M. Sur. No. 176.
Fishing 3,110 ft.

**SAN PATRICIO COUNTY**

Masterson et al's (Tom Graham) No. 1 Wurzbach, 330 ft. from W line, 4,350 ft. from S line of C. C. Hornsby Sur.
Standing 5,521 ft.

**STARR COUNTY**

Accumulated Royalties' No. 1 Ferry.
R.U.; ready to spud.
Armstrong, Emmanuel & Adams' No. 1 S.C. C.C., 330 ft. from S and E lines of Blk. 57, Porcion 88-89.
T.D. 2,740 ft.; hole swbd. dry; P.B. to 2,240 ft.; to perforate.
C. R. Borah's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E lines of Sec. 6 (NE part of county).
S.D. 3,300 ft.
John H. Clopton's No. 1 Mrs. A. M. Kelsey-Bass, 2,950 ft. from W line, 2,610 ft. from E line of Porcion 88 in Porcion 86, Jurisdiction of Camargo.
Drlg.; no depth given.
John H. Clopton's No. 1 Dioncia Lopez de Tijerina, Blk. 4, Tract C-14, Porcion 80.
Drlg. 3,800 ft.
Heep Oil Co.'s No. 1-A Guerra, Blk. 35, 30 ft. S from No. 1, Porcion 55.
Drlg. 3,475 ft.
Henshaw Bros.' (Sunray Oil Co.) No. 1 Sanches, 330 ft. from NE and NW lines of 40-ac. tract, Sur. 344.
Set 100 ft. of surface csg.
Hiram Reed's No. 1 Block Bros., Tract A-28, Porcion 80, Blk. 4.
S.D. 1,540 ft.; oil sand 1,490-1,501 ft.
Dale Sneed's No. 1 Y. and V. Guerra, 330 ft. W line of Por. 68, 330 ft. S line of 1,000-ac. block of N end of Por. 92, in Por. 68.
Abd. 330 ft.
Sun Oil Co. and Humble's No. 1 Mantor & Briggs, 660 ft. from NE line, 657 ft. from NW line of A.B.&M. Sur., NW¼ of NW¼ of Sur. 53.
Drlg. 3,800 ft.

**WEBB COUNTY**

Payne et al's No. 1 Hoggterp, 450 ft. from SE line, 300 ft. from NE line, Blk. 5, Sur. 1,110, W of Oilton.
S.D. 1,982 ft.
Arthur H. Wray's No. 1 Geo. Stuempke, Share 1, Brewster pasture, Galan grant.
Drlg. 1,125 ft.; moving in electric rig; (corrected depth).

**WILLACY COUNTY**

W. T. Daniel's No. 2 Armendiaz, near Rio Hondo, 7,798 ft. from E and W lines of Share 14.
T.D. 3,660 ft.; moving in electric rig.
Kingwood Oil Co.'s No. 1 Santa Rosa, Inc., 160 ft. from E line, 637 ft. from S line of Sec. 30, Blk. 16, Share 44, San Juan de Carricitas grant.
S.D. 2,306 ft.

**WILLIAMSON COUNTY**

Fuchs & Walters' No. 1 S. Allmon, John Bevil Sur. No. 56, 150 ft. from SW line, 300 ft. most westerly SW line of 264-ac. tract.
Fishing 93 ft.; hole caving.
H. L. Goff et al's No. 1 Albert Klotz.
Spudded.
Hays et al's No. 1 Pfluger, 150 ft. from E line, 150 ft. from S line, White Sur.
S.D. 915 ft.
Hayes et al's No. 2 Pfeluger, H. White Sur.
Abd. 1,042 ft.
Stone & Gebhardt's No. 1 Wernli, 150 ft. S

and E lines of tract, P. Cartwright Sur. Standing 950 ft.

ZAPATA COUNTY

F. H. Crow et al's No. 1 Daniel Ysaguirre, 330 ft. out of SW cor. Share 1, Porcion 14-15-16, D. Ysaguirre tract. Drlg. 1,960 ft.

Danvers & Harrison's No. 1 D. A. McAskill, 660 ft. SE and SW lines, Blk. 51, Edwards Subd., Borrego grant. Set and cmtd. csg. 20 ft.

Joe Palmer's No. 1 Emma A. Markrud, 150 ft. from NE and NW lines, Blk. 22, Sur. No. 616. Rigging up.

Texas Royalty Investment Co.'s No. 1 N. J. Vela, 686 ft. from NE line, 300 ft. from NW line, Blk. 7, Por. 29. S.D. 2,338 ft.

## Southwest Texas Proven

Week Ending, June 1

CARROLL—BASTROP COUNTY

Nelson Puett's No. 4 J. H. Carroll Estate. T.D. 2,223 ft.; 6⅝-in. csg. at 2,117 ft.; I.P. 35 bbls. per day.

Nelson Puett's No. 5 Carroll Estate. Drlg. 800 ft.

CEDAR CREEK—BASTROP COUNTY

J. E. Mills' No. 2 H. H. Lytton, 225 ft. NW line, 825 ft. SW line, 320 acres, J. A. Navarro Sur. S.D.; shale 900 ft.

CAESAR—BEE COUNTY

El Toro Oil Co.'s No. 1 J. J. Grisson, 150 ft. from N and W lines of 10-ac. tract, P. B. Early Sur. Spudded.

Luling O. & G. Co.'s No. 1 Vaughn. T.D. 3,035 ft.; I.P. 200 bbls. per day.

El Toro's No. 3 Gardner, 150 ft. from N and W lines of lease, F. Lewis Sur. Set csg. 3,025 ft.

Swiger et al's No. 4 Gardner, W offset to Vaughn producer. Moving in material.

DIRKS—BEE COUNTY

Mills Bennett Prod. Co.'s No. 3-A Bassinger, 330 ft. from N line, 660 ft. from W line of NE¼ of NW¼ of Sec. 7, J. M. Uranga grant. Drlg. 2,000 ft.

Mills Bennett Prod. Co.'s No. 1 L. W. Dirks et al, 400 ft. from NE line, 150 ft. SE of road, H. L. Williams Sur. Abd. 4,145 ft.

Dirks Bros.' No. 2 Harris, 990 ft. from E line, 330 ft. from N line, J. L. Dugat Sur. Drlg. 1,520 ft.

Highland Oil Co.'s No. 1 P. L. Campbell, 330 ft. from NE line, 540 ft. NW of No. 3, W. B. Blanchard Sur. Location.

Home Oil Co.'s No. 2 Bassinger, 990 ft. from N line, 330 ft. from E line of N½ of NW¼ Sec. 7. Sand 3,511-37 ft.; comp. for good well.

Home Oil Co.'s No. 3 Bassinger, 330 ft. from E line, 660 ft. due S of No. 2, Sec. 7, J. M. Uranga grant. Rigging up.

Home Oil Co.'s No. 4 Bassinger, 330 ft. from S and E lines of Sec. 7, J. M. Uranga grant. Drlg. 2,500 ft.

PETTUS—BEE COUNTY

L. T. Barrow's No. 3-A McKinney, S 65 deg. E 1,500 ft. from No. 2-A. 1,200 ft.; no report.

RAY—BEE COUNTY

Magnolia Pet. Co.'s No. 1 Geo. Ray, 150 ft. from E line, thence 1,220 ft. from S along E line to NW line of survey, W. B. Blanchard Sur. Moving in material.

TULETA—BEE COUNTY

Mills Bennett Prod. Co.'s No. 1-B C. W. Bassinger, 254 ft. from W line, 330 ft. from S line of SE¼ of NW¼ of Sec. 7, Bagley Subd., Uranga grant. Derrick; S.D.

Leslie McKay's No. 2 Campbell, 150 ft. from NE line, 600 ft. NE of No. 3 Brooks & Burleson Sur. T.D. 3,920 ft.; no gauge.

Leslie McKay's No. 3 Campbell, 150 ft. from E line, 330 ft. from S line of W½ of Blk. 21, Brooks & Burleson Sur. Drlg. 1,500 ft.

Southwest Exploration Co.'s No. 1 Heyden & Bruckhan, C of farm tract, 330 ft. from N and W lines of Sec. 20, Uranga grant. Rigging up.

Texas Co.'s No. 1 Young, 2,175 ft. W, 330 ft. N of SE cor. of T. J. Butler Sur. 10-in. csg. at 384 ft.; 3,569 ft.; no report.

Wrightsman Oil Co.'s No. 1 Kimball, 1,300 ft. from NW line, 1,500 ft. from NE line, S. Winship Sur. Cored sand; set csg. 3,542 ft.

VON ORMY—BEXAR COUNTY

Owens et al's No. 2 Owens, 1,900 ft. SN line, 700 ft. EW line of lease, 155.7 acres, S. Jett Sur. No. 53. Drlg. shale 445 ft.

T. and C. Owens' No. 1 Trawalter, 150 ft. W of river, 150 ft. from S line of tract No. 15, A. G. Trawalter Subd. Spudded; no report.

Joe H. Parker's No. 1 James McClosky, 1,500 ft. N line, 475 ft. W line, F. A. Deas-fire Sur. Drlg. 134 ft.

A. J. Trawalter's No. 11 feo. Moving in material.

DUNLAP—CALDWELL COUNTY

R. T. Walker's No. 2 Walker, S. Seale Sur. Chalk 2,171 ft.; 200 ft. oil in hole; R.U. to pump.

Exploration Co.'s (F. Meyers) No. 1 W. T. Mooney, 810 ft. from S line, 450 ft. from W line of 95-ac. tract, S. Seal Sur. Drlg. hard Taylor 2,100 ft.

Bellard & Whiting et al's No. 1 Mrs. A. C. Bridges et al, 650 ft. from NW line, 450 ft. from NE line of Soleman Seal Sur. Drlg. sand 250 ft.

W. F. Moosley's No. 1 J. M. Pierce. Bailing small show iron; chalk 2,234 ft.; 6⅝-in. csg. 2,050 ft.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Georgia F. Hill's No. 1 W. J. Nester, 357.38 ft. from E line, 253.55 ft. from S line of SE¼ of NE¼ of Sec. 47. T.D. 2,276 ft.; sand 2,263-76 ft.; set csg.; W.O.C.

Magnolia Pet. Co.'s No. 45 D.C.R.C., 2,970 ft. from S line, 2,310 ft. from E line, Sur. 208. Rigging up.

Magnolia Pet. Co.'s No. 1 Riggs, 330 ft. from N and W lines of NE¼ of NE¼ Sur. 46. Rigging up.

Magnolia Pet. Co.'s No. 12 Riley, 990 ft. W line, 1,650 ft. S line of SW¼ of Sur. 45. Rigging up.

Magnolia Pet. Co.'s No. 8 J. T. Johnson, 330 ft. from S line, 990 ft. from E line of N½ of SE¼ of Sur. 78. T.D. 2,339 ft.; I.P. 50 bbls. per day on pump.

Magnolia Pet. Co.'s No. 11 J. W. Riley, 990 ft. from S and W lines, Sur. 45. Drlg. 2,275 ft.

Parr Oil Corp.'s No. 3 R. E. Glover, 330 ft. from N and E lines of SE¼ of SE¼ of Sec. 44, J. Poitevent Sur. Location.

G. G. Porter's No. 3 Smith, 330 ft. from N and E lines of NW¼ of NE¼ of Sur. 46. Drlg. 350 ft.

SARNOSA—DUVAL COUNTY

Sun Oil Co.'s No. 9 Cuellar Motor Co., 990 ft. from NE line, 990 ft. from SE line of Sec. 576, B.S.&F. Sur. Drlg. 2,560 ft.

HOFFMAN—DUVAL COUNTY

Bridwell Oil Co.'s No. 3 Sutherland, 1,650 ft. from E line, 990 ft. from S line, of E½ of Sur. 122. Rigging up.

Conway & Butscher's No. 2 Hoffman, 330 ft. S, 325 ft. E of SW cor. of Sur. 120 in Sur. No. 114 S.D. 3,014 ft.

Duval Oil Corp.'s No. 1-A Bishop Cattle Co., 1,650 ft. from E line, 330 ft. from S line of Sec. 70. Coring for sand 2,700 ft.

LOMA NOVA—DUVAL COUNTY

Al Buchanan and Blanco's No. 4 Ruiz, 660 ft. W of No. 2. Drlg. 3,155 ft.

Byrd & Campbell's No. 7 P. T. Wright, 330 ft. from S and E lines of 132.5-ac. tract, Blk. 10,468, Sur. No. 101. Drlg. 2,065 ft.

Frank J. Gravis' No. 1 Byland, 330 ft. from N and W lines of Blk. 4, Sur. 78. D.S. test 2,587-92 ft.; indicated good well; running csg.

Humble O. & R. Co.'s No. 2 Welder, 990 ft. from S line, 330 ft. from W line of tract, Sur. 73. Rigging up.

Humble O. & R. Co.'s No. 3 M. Vela, 330 ft. from S line, 710 ft. W of No. 2, N½ Sec. 42, T.T.R.R. Co. Sur. Coring 2,695 ft.

Humble O. & R. Co.'s No. 1-C Jas. F. Welder, 330 ft. from S and W lines of Sec. 73, Stone, Kyle & Kyle Sur. T.D. 2,734 ft.; I.P. 10 bbls. per day on pump.

Stieren Oil Corp.'s No. 1 Wright et al, S offset to Buchanan's No. 1 Ruiz, 330 ft. out of NE cor. of Sur. 72. Drlg. plugs 2,716 ft.; preparing to complete.

Texas Co.'s No. 4 Vela, 330 ft. from S and E lines, Sur. 42. Set 7-in. csg. in sand 2,728-35 ft.; W.O.C.

SEVEN SISTERS—DUVAL COUNTY

Dulce Oil Co. and Henderson & Harvey's No. 1 Serna, 150 ft. from E line, 330 ft. from N line of NW¼ of Sec. 284. Drlg. 820 ft.

Humble O. & R. Co.'s No. 1 Bank of Fredericksburg (Wright), 1,645 ft. from S line, 990 ft. from E line, Sur. 383. Location.

PEARSALL—FRIO COUNTY

Amerada Pet. Corp.'s No. 1 W. H. Smith et al, 4,560 ft. from NE line, 1,650 ft. from SE line, Joseph V. Mason Sur. No. 322. Drlg. shale and lime 4,240 ft.; 9-in. csg. at 4,120 ft.

DARST CREEK—GUADALUPE COUNTY

Grayburg Oil Co.'s No. 14 McKean, 700 ft. from No. 12, Cottle Sur. Standing 1,854 ft.

Grayburg Oil Co.'s No. 15 McKean, 200 ft. from NW line, 150 ft. from SW line, H. Cottle Sur. Sand 250 ft.; 10-in. csg. at 21 ft.

Texas Co.'s No. 2 Posey (workover). Old T.D. 2,606 ft.; set 7-in. csg. at 2,575 ft.; T.D. of sidetracked hole 2,583 ft.

DINERO—LIVE OAK COUNTY

Marine Oil Co.'s No. 1 Adair, 330 ft. from N and W lines of 366-ac. tract in J. McGlain Sur. Coring 5,256 ft.

Smith & Story's No. 1 Nueces Townsite, Jane Curry Sur., NW offset to their No. 1 Fredericks. T.D. 5,216 ft.; I.P. 400 bbls. per day; ¼-in. choke.

LUCAS—LIVE OAK COUNTY

Houston Oil Co.'s No. 32 Cartwright, 1,124 ft. N of No. 31, Trudo Sur. Coring shale 6,515 ft.

Lion Oil Ref. Co.'s No. 5 P. E. McNeill, 330 ft. from NW line, 1,350 ft. from SE line of G.H.&H. Sur. in Jane Curry Sur., Blk. 9. Location.

Darby Pet. Co.'s No. 1 McNeill, 330 ft. out of NW cor. of 116-ac. lease, 1,200 ft. SE of Lion's No. 1. Drlg. 3,550 ft.

SAM FORDYCE—HIDALGO COUNTY

Barnett et al's No. 2 Missouri Pacific, 1,000 ft. E of W line of right of way. Moving in material.

Cortez Oil Co.'s No. 2-C Smith, 230 ft. from N line, 490 ft. from W line of NE 40 acres of Tract B-3, Porcion 41. Location.

Cortez Oil Co.'s No. 3-C Smith, 230 ft. from N line, 1,150 ft. from W line of NE 40 acres of Tract B-3, Porcion 41. Location.

Cortez Oil Co.'s No. 1-C Smith, 230 ft. from N and W lines of NE 40 acres of Tract B-2, Porcion 41. Coring 2,755 ft.

Double D. Oil Co. and Harrison's No. 2 Lula George, 220 ft. from W line, 690 ft. from S line of SW 40 acres of Tract 13, Porcion 41. Drlg. 2,550 ft.

Gem Oil Co.'s No. 2-A Seabury, 230 ft. from N line, 307 ft. due W of No. 1, Tract 256, Porcion 38. Cored saturated sand at 2,763-71 ft.; set csg.

Harrison et al's No. 2 (4) Guerra, 330 ft. from S and E lines of S 40 acres of Share 12, Porcion 41. Rigging up.

W. F. Lacy's No. 1 V. R. deFlores, 75 ft. from N line, 107 ft. from E and W lines, Blk. 266, Porcion 38. Sand 2,781-83 ft.; preparing to test.

H. J. Porter's No. 2 C. E. Smith, N end of S½ of tract in Tract 278, Porcion 40. Spudded; S.D.

Rogers Oil & Gas Co.'s No. 3-B Guerra, 516 ft. from E line, 150 ft. from S line, Tract 254, Porcion 40. Cored saturated sand at 2,746-60 ft.; set csg.

MERCEDES—HIDALGO COUNTY

Union Sulphur Co.'s No. 1 American Rio Grande L. & I. Co., 400 ft. S and W of NE cor. of Lot 229, Blk. 59 (W.O.). Cleaned down to 3,200 ft.

Union Sulphur Co.'s No. 2 American Rio Grande L. & I. Co., 400 ft. S and E lines of tract, Blk. 56, Capisallo district (W.O.). T.D. 3,044 ft.; drlg. 4,100 ft. in sidetracked hole.

SANDIA—JIM WELLS COUNTY

Magnolia Pet. Co.'s No. 6 Seeligson, 660 ft. W. 330 ft. S of No. 3, Canales Sur. No. 20. S.D. 6,010 ft.; (corrected depth).

O. K. Killam's No. 6 Wade, 500 ft. S of No. 4. Abd. 4,100 ft.

BURNEL—KARNES COUNTY

American Liberty Oil Co.'s No. 1 C. H. Walfmuller, 330 ft. from SE and SW lines of 207-ac. tract, Jas. Johnson Sur. T.D. 3,475 ft.; comp.; gas well from 3,292-3,303 ft.; I.P. 20,000,000 ft. of gas per day.

Luling O. & G. Co.'s No. 1 W. C. Boyce, 150 ft. from NW cor. of tract, J. Johnson Sur. T.D. 3,370 ft.; rebuilding derrick.

KINGSVILLE—KLEBERG COUNTY

Ray Clark's No. 1 House, Lot 5, Blk. 37, K.T.&I. Co. Sur. S.D. 1,000 ft.

Fidelity Exploration's No. 1 Paul O. Henry, 150 ft. from N line midway E and W lines of Blk. 2, Sec. 49, K.T.&I. Sur. Set surface csg. 304 ft.; no report.

Fidelity Exploration Synd.'s No. 1 Vivian Kivlin, Sec. 4, Blk. 39, K.T.&I. Sur. on Vivian Kivlin lease. Derrick up.

JACOB POOL—McMULLEN COUNTY

Inland Oil Co.'s No. 3 Lark, 150 ft. from W line, 1,285 ft. from N line, Blk. 132, Scrugham Sur. Rigging up.

Loma Oil Co.'s No. 38-A Jacob, 150 ft. from E line of lease, 310 ft. from NE of No. 11-A, Sur. 8. Dry and abd. 1,070 ft.

Loma Oil Co.'s No. 2-W L. Jacob Corp., 220 ft. from E line, 1,320 ft. due N of No. 1-W, W. D. Benham Sur. T.D. 925 ft.; set csg. at 910 ft.

M. E. Young's No. 8-A Cox, E of Frio River across line from Lark tract in M. Holy Sur. (old well). Sand 1,070 ft.; no report.

ANGELITA—SAN PATRICIO COUNTY

Continental and Atkins & O'Neal's No. 3 Welder, 466 ft. from S line, 150 ft. W of SE cor. of Anthony tract, J. Hart Sur. Set 10-in. surface csg. at 1,000 ft.

SINTON—SAN PATRICIO COUNTY

Conroe Drlg. Co.'s (Heep) No. 1-D Welder, N of Sinton. S.D. 2,770 ft.

Heep Oil Co.'s No. 1-E E. H. Welder, 455 ft. out of NE cor. of Sec. 46, Coleman Pasture. Made D.S. test; showed 550 lbs. pressure; well blew in making mud and oil; killed to run tubing and screen; T.D. 5,670 ft.

Plymouth Oil Co.'s No. 2-C E. H. Welder, 2,000 ft. from N line, 650 ft. from E line, Sec. 49, Subd. No. 1 of Eliza H. Welder ranch. Cored sand with good show of oil 5,621-24 ft.; to make D.S. test.

Plymouth Oil Co.'s No. 3-C E. H. Welder, 744 ft. from N line, 2,000 ft. from E line, Sec. 49, Subd. No. 1, E. H. Welder ranch. Cored broken sand and shale showing oil from 5,486-93 ft.; D.S. test from 5,475-96 ft.; tested 155 lbs. pressure.

Plymouth Oil Co.'s No. 1-D E. H. Welder, 466 ft. from N line, 466 ft. SE of Ry., Sec. 1, Subd. No. 1, E. H. Welder ranch. Drlg. 4,450 ft.

LOS OLMOS—STARR COUNTY

H. L. Curry's No. 2 Bass, 660 ft. from S line, 1,835 ft. from E line of 640-ac. tract, Sec. 8, Porcions 75, 76 and 77. S.D. 1,250 ft.

Ed Linberg's No. 7 Bass, 1,500 ft. from W line, 1,675 ft. from N line of Share 6, Porcion 75. S.D. 500 ft.

PLACETAS—STARR COUNTY

Hughston Oil Co.'s No. 1-A Gregg-Wood, S end of Porcion 84; replacement well. Drlg. 1,540 ft.

RIO GRANDE—STARR COUNTY

Hiram Reed's No. 2 D. & C., 480 ft. from S line, 175 ft. from E line, Blk. 6, Tract 21, Porcion 80. Rigging up.

Sioux Oil Corp.'s No. 8 Goodrich, 150 ft. from W line of Blk. 5, 150 ft. from N line of Blk. 5, Porcion 81. T.D. 1,359 ft.; I.P. 75 bbls. per day on pump.

W. W. Zimmerman's No. 1 D.&C., 2,500 ft. SW of Rio Grande City Field, 150 ft. out of NE cor. of Share 21, Porcion 80, Blk. 7. Abd. 1,425 ft.

SAXET—NUECES COUNTY

Benedum & Trees' No. 1 Stillwell, 330 ft. from W line, 629 ft. from N line, Blk. 31. Fishing 996 ft.; (corrected).

Houston Oil Co.'s No. 3 Morgan, 990 ft. from E line of lease, 330 ft. from N line of lease, Sec. 7, Range 5. 7-in. csg. 4,868 ft.

Magnolia Pet. Co.'s No. 2 W. W. Walton, 330 ft. from E line, 289 ft. from S line of 92.11-ac. tract, Enrique Villareal Sur. Location.

Southern Minerals' No. 1-A Rand Morgan, Roberts Sur. Drlg. 5,004 ft.

BRUNI-WEBB COUNTY

Associated Oil Co.'s No. 3 A. M. Bruni, 660 ft. N of No. 2, 330 ft. from W line, 5,000-ac. tract, Blk. 7, M. Arispe grant. Location.

Associated Oil Co.'s No. 6 Bruni, 330 ft. from SW line, 990 ft. from NW line, Arispe grant. Drlg. 1,110 ft.

American Liberty Oil Co.'s No. 2-C A. M. Bruni Est., 266.81 ft. from E line, 408.15 from S line of Unit 2, Sec. 7, M. Arispe grant. Sand 3,398-3,437 ft.; reaming.

Highland Oil Co.'s No. 8 Bruni, 1,650 ft. from NW line, 330 ft. from NE line, Sur. 7. Coring 3,407 ft.; had sand 3,387-94 ft.

Highland Oil Co.'s No. 10 A. M. Bruni, 940 ft. NE of No. 3, 506 ft. SE of No. 5, 262.4-ac. tract, M. Arispe grant. Location.

Highland Oil Co.'s No. 12 A. M. Bruni Estate, 520 ft. E of No. 6, 330 ft. from S line of 200-ac. tract, M. Arispe grant. Location.

O. W. Killam's No. 37 Bruni, 330 ft. from NE and SE lines, Sur. 6. Set csg. 3,332 ft.; W.O.C.

LAUREL—WEBB COUNTY

South Texas Oil Co.'s No. 1 Laurel Bros., 100 ft. from E line, 200 ft. from S line of Sec. 269, Blk. 2, C.C.S.D.&R.G.N.G. Sur. Rebuilding derrick.

WEST COLE POOL—WEBB COUNTY

Ross Barnhart's No. 1 de la Garza, 1,500 ft. from N line, 200 ft. from E line of Sur. 262. T.D. 2,406 ft.; fishing 1,600 ft.

Carolina Texas O. & G. Trust, Inc.'s No. 11 S. Benavides, 150 ft. from S line, 600 ft. from W line, Blk. 12, Sur. 683. T.D. 4,993 ft.; comp. as gas well making 40 bbls. of oil.

Magnolia Pet. Co.'s No. 7 Carlos Benavides, 340 ft. due W of No. 8, 150 ft. from S line, Sec. 661, S.K.&K. Sur. Drlg. 1,915 ft.

Magnolia Pet. Co.'s No. 3 S. S. Benavides, 200 ft. from N and W lines of Sec. 696, B.S.&F. Sur. Location.

Magnolia Pet. Co.'s No. 1-B S. Benavides, 347 ft. from NW line, 312 ft. from SW line, Blk. 290, Arispe grant. Sand 2,778-90 ft.; I.P. 150 bbls. per day by heads.

Magnolia Pet. Co.'s No. 9 A. Benavides, 150 ft. from N line, 300 ft. E of No. 8, Sec. 660, S.K.&K. Sur. T.D. 2,345 ft.; I.P. 30 bbls. per day.

NOACK—WILLIAMSON COUNTY

Coffield & Lanning's No. 3 Heap, 200 ft. from N line, 225 ft. from W line of tract in White Sur. Location.

R. R. Ogden's No. 1 Matteck, 150 ft. N and W lines of 108.5-ac. tract in White Sur. Location.

W. L. Stephens' No. 1 J. P. Carlson, 200 ft. out of NW cor., 900 ft. SE line, 610 ft. SW line of Samuel C. Jones Sur. S.D.; shale 200 ft.

BYERSVILLE—WILLIAMSON COUNTY

H. T. McGee's No. 1 A. J. Heal, 3,100 ft. from SW line, 3,250 ft. NW line, P. Cartwright Sur. S.D.; shale 935 ft.

BLAS URIBE—ZAPATA COUNTY

O. W. Killam's No. 10 Bruni, 450 ft. from SW line, 150 ft. from NW line of Blk. 60, Borrego grant. Sand 1,819-22 ft.; T.D. 1,833 ft.; W.O.C.

ESCOBAS—ZAPATA COUNTY

S. R. & C. Oil Corp.'s No. 15 B. F. Cuellar, 160 ft. from NW and NE lines of Blk. 11, Sur. 65. Coring 1,200 ft.

LOPENA—ZAPATA COUNTY

Gem Oil Co.'s No. 1 Ramirez, 330 ft. from NW and SW lines of Share 3, Porcion 18, J. C. Ramirez grant. Set csg. at 400 ft.; W.O.C.

Trowel et al's No. 1 W. Z. Guerra. Coring brittle shale 1,790 ft.; no report.

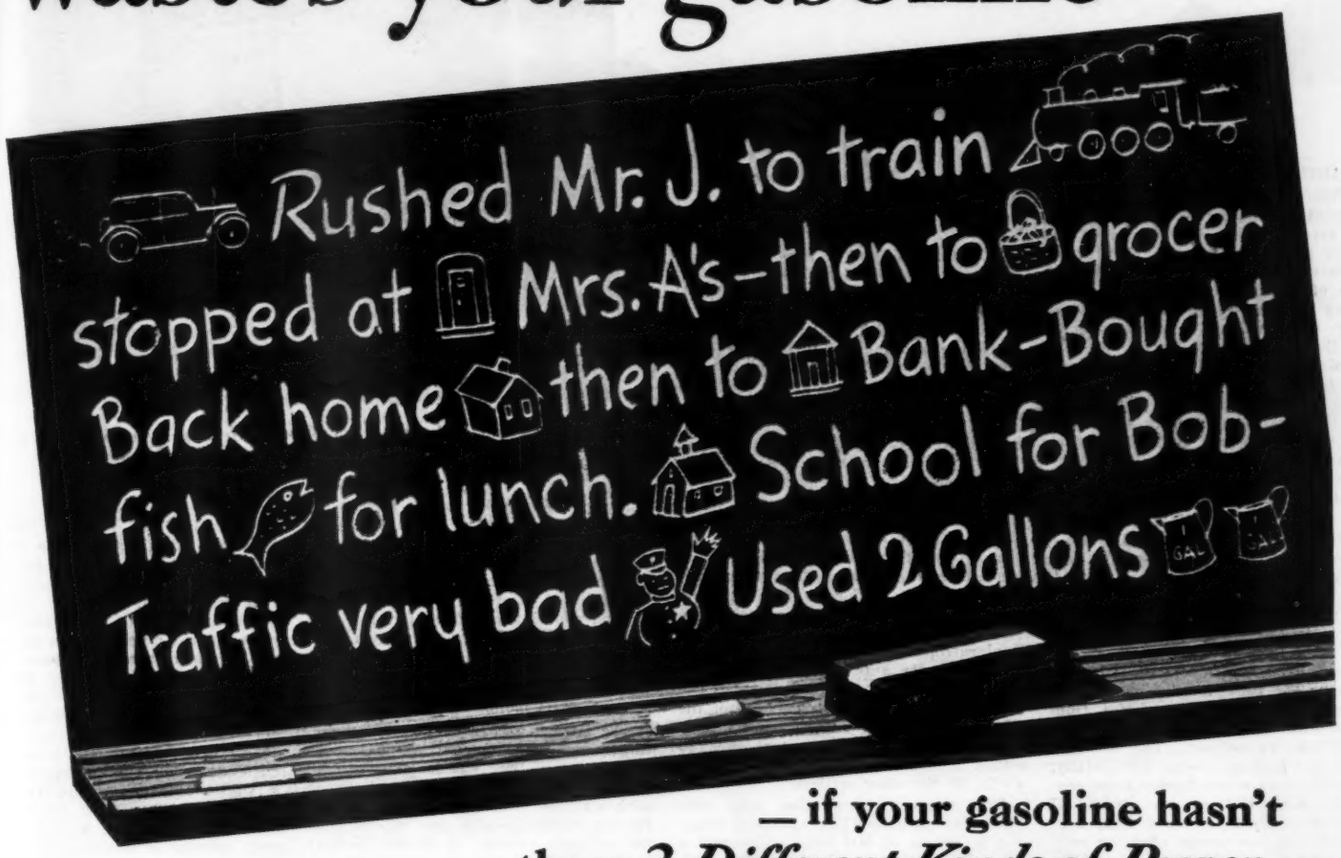
JENNINGS—ZAPATA COUNTY

Texas Co.'s No. 69 Jennings, 20,046 ft. from SW line, 7,147 ft. from SE line, Cerrito Blanco Sur. 7-in. csg. 1,205 ft.; T.D. 1,213 ft.; swbd. and bailed; 1,030 ft. of fluid in hole after standing 12 hrs.; to run screen and tubing; no report.

MIRANDO VALLEY—ZAPATA COUNTY

C. L. Smith's No. 1 Robert Hinnant, 330 ft. out of NW cor. Sec. 307, Blk. 27, P. M. Makeig Sur. Drlg. 925 ft.

# Stop-and-go driving wastes your gasoline


Rushed Mr. J. to train
stopped at Mrs. A's—then to grocer
Back home then to Bank-Bought
fish for lunch. School for Bob-
Traffic very bad Used 2 Gallons

## —if your gasoline hasn't these 3 *Different Kinds of Power*—

4 OUT OF EVERY 5 miles you drive are within 25 miles of your doorstep . . . neighborhood driving . . . making business, shopping and social calls.

Yet your yearly short trips can run up as much mileage as CROSSING THE UNITED STATES 3 TIMES!

This continual "stop-and-go" wastes your money—unless your gasoline has *3 distinct kinds of power—PERFECTLY BALANCED.*

It must have POWER for quick starting . . . POWER for swift pickup . . . POWER for steady running.

Super-Shell, the first truly *balanced* gasoline, has these 3 kinds of power, and so CUTS YOUR DRIVING COSTS in three ways:

**Can save up to a cupful of gasoline on "Cold" Starting**—In summer or winter, Super-Shell starts instantly, often warms up in *half* the time of ordinary gasoline—with less choking. So you use less gasoline.

**Can save up to a cupful of gasoline in 10 Minutes of Hard Pulling**—With Super-Shell's even volatility, you can race up steep hills *on less gasoline.* And you avoid that *knocking* which alone in a few minutes can waste up to 10% of your power.

**Can save up to a cupful of gasoline in One Hour of Steady Running**—many motorists report. Every drop of Super-Shell vaporizes more completely. At all speeds, it delivers maximum power. On your long drives as well as on your short trips, it saves you money.

SUPER-SHELL is also "weather-conditioned" for changes in temperature in all different climates. This advance is typical of many others in which Shell engineers have been the pioneers.

Super-Shell is on sale—at NO EXTRA COST—at 30,000 neighborly Shell stations from Coast to Coast.

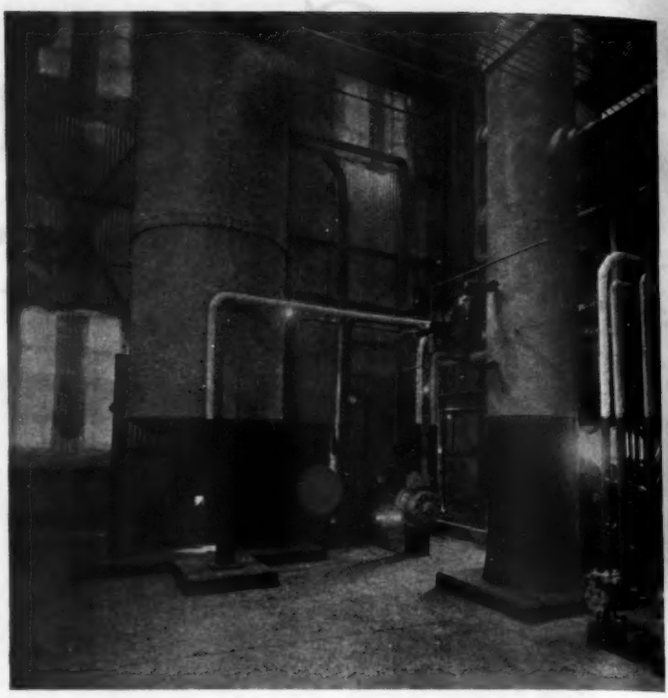
SHELL

# SUPER-SHELL

*Saves on today's stop-and-go driving*

# Bradford-Penn Starts Chlorex Treating Unit

By ROBERT C. CONINE



*Hot oil systems as part of the new Chlorex solvent plant in the Clarendon, Pa. plant of the Bradford-Penn Refining Corp.*

CLARENDON, Pa., June 1. — Bradford-Penn Refining Corp. here recently completed installation of its Chlorex solvent extraction plant. This unit was built to assure maximum quality in the corporation's lubricating oils. As an affiliate of Forest Petroleum Corp., this refinery has the advantage of an assured supply of Bradford district crude oil from the largest producer in the field. The solvent plant, designed and operated to further improve products already considered in the highest premium class, naturally incorporates features to minimize losses of solvent and charge stock and at the same time give optimum increases in viscosity index and resistance to sludging and decreases in Conradson carbon residue.

An important feature of the Bradford-Penn installation is the system for continuous recovery of solvent from the raffinate, extract and water towers under 100 m.m. absolute pressure. Quite as interesting is the application of heat by means of a "hot oil" belt, rather than by direct firing in a pipe still or by use of steam. The provision for recovery of Chlorex from the water removed from the separator is responsible for the ultimate saving in solvent. The arrangement of the settlers, placed horizontally, the system of flow and temperature control for fresh Chlorex and fresh oil charges, and the liquid level float controls governing the pumps charging each of the settlers, round out, in the main, the advances in solvent processing reflected in this installation.

### Operation

The fresh oil charge is pumped to the pipe mixer (1) under flow control and temperature control (60° F. to 125° F. depending upon stock and results desired), from which the oil enters settler 1 after contacting the thrice used Chlorex (extract solution) from settler 2. In settler 1 the extract solution settles to the bottom and is pumped, under automatic float control, to the vacuum Chlorex recovery tower. The once contacted oil, or raffinate solution from settler 1 flows under first stage pressure to pipe mixer (2) where it contacts with twice used Chlorex (extract solution) from settler 3. The raffinate solution from settler 2 flows to pipe mixer (3) where it contacts with once used Chlorex (extract solution) from settler 4. The raffinate solution from settler 3 is contacted in pipe mixer (4) with fresh Chlorex. The final raffinate solution from settler 4 is pumped under automatic control to the raffinate solution vacuum tower. The pressure differential between each of the four settlers is small, there being a pressure of 35 pounds per square inch in settler 1, and drops of 5 pounds, successively, in the other settlers.

This compact installation (the complete plant is housed) is capable of treating in excess of 500 bbls. of neutral a day. By placing the settlers horizontally the use of smaller sizes is permissible. The claims made for this arrangement are: Larger surface presented for disengaging and less interference from counter-current charge. Settling is thus accomplished more readily. The pipe mixers, containing orifice plates, are installed vertically. They are shown horizontally in the flow diagram for the sake of convenience.

### Vacuum System

The solvent recovery system is maintained under a vacuum of 26 to 28 inches of mercury. The incoming raffinate solution is first heated by exchange with stripped outgoing raffinate and by further exchange with the vapors from the raffinate column. A further preheat is given in the preheater bundle by hot oil from the belt system, the charge flashing into the tower at 300° F. to 325° F. Additional heat is supplied in the column by the reboiler which is also heated by hot oil. The maximum temperatures in the "hot oil" belt system are limited to 450° F. in order to minimize Chlorex decomposition through high skin temperatures. Stripped raffinate passes from the base of the tower under float control through the bottoms heat exchanger and a cooler to storage. The hot oil used as a heating medium is heated in a vertical pipe heater fired by oil or gas. The extract solution flows in a similar manner except that no exchange is taken against the bottoms extract. The rectifying section of the extract column is larger in diameter due to the large amount of Chlorex vapors from the extract solution.

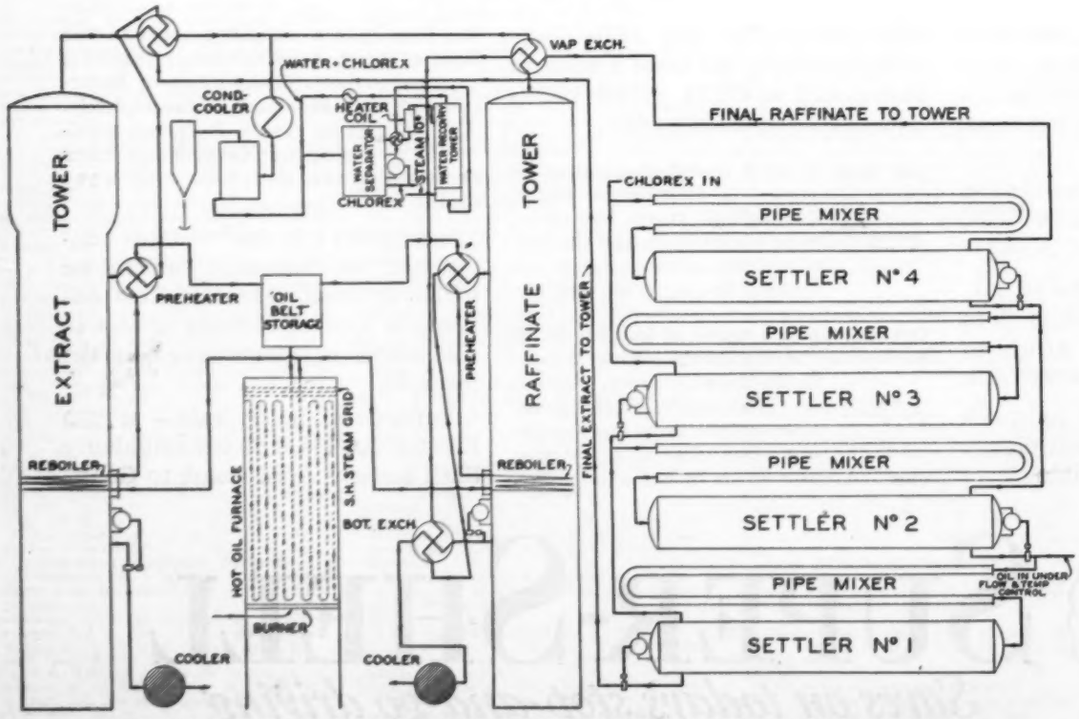
In both recovery columns exhaust steam at 10 pounds pressure is introduced at the base of the tower to aid stripping. The steam and Chlorex vapors from both columns after passing through separate exchangers meet in a common cooler condenser and fall into a water separator through a barometric leg. They are then separated from one another by gravity.

The water from the separator contains about 1 per cent of Chlorex in solution. Although Chlorex boils at a much higher temperature than water, a mixture of Chlorex and water form what is known as a minimum boiling mixture which boils at about 203° F., or less than the boiling point of water alone. The water containing 1 per cent of Chlorex is passed through a preheater and flashed into the packed water tower where it is stripped by live steam. The Chlorex rich vapors flash off and the Chlorex-free water passes out of the bottom of the water tower to the sewer. The Chlorex rich vapors are condensed and return to the water separator, from which Chlorex flows to storage.

The Chlorex loss is estimated at less than 0.04 per cent of the total volume circulated, and is accounted for in spillage, leakage, and samples not returned to the system. Chlorex decomposition is so low that the injection of ammonia is not necessary for neutralization.

The Bradford-Penn unit was designed by its own staff without the assistance of outside engineering firms.

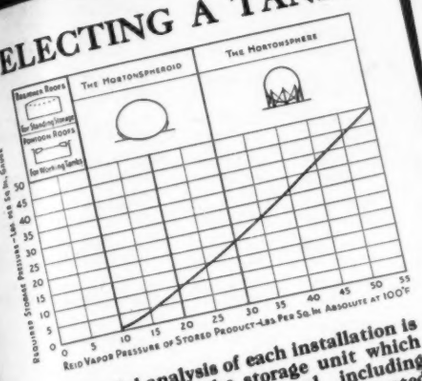
(Continued on Page 64)




*Simplified flow chart of Bradford-Penn Refinery Corp.'s new Chlorex solvent treating plant*

# *Out of the* Book of Experience

## SELECTING A TANK


The Hortonspheroid
The Hortonsphere
Required Storage Pressure—Lbs. per Sq. In. Gauge
Reid Vapor Pressure of Stored Product—Lbs Per Sq. In. Absolute at 100°F

A careful analysis of each installation is needed to select the storage unit which will prove most economical including evaporation loss. There are three accepted methods of preventing evaporation loss in tanks: the elimination of vapor space, and use of a variable vapor space, and pressure storage. We can supply standard pressure storage units embodying any of these principles, and to meet your individual conditions.

CHICAGO BRIDGE & IRON WORKS

## HORTONSPHERE

This container is a true sphere –the economical shape for the relatively high internal pressures for which it is designed. It is built in 5,000 and 10,000-barrel sizes, more economically than a number of smaller pressure units. Many years of experience prove the big savings effected by the Hortonsphere in storing liquid or gas at pressures of 20 lbs. per square inch and up.

CHICAGO BRIDGE & IRON WORKS

## WIGGINS PONTOON ROOFS

**for working storage tanks**

Since this roof floats directly on the surface of the liquid at all levels, vapor space inside the tank is eliminated and all breathing and filling losses are thereby prevented. In addition, the Pontoon Roof is designed to prevent boiling losses from products having a volatility sufficient to cause boiling only during the hottest hours of the day. This roof is effective protection against evaporation losses on all working tanks handling crude oil or gasoline.

CHICAGO BRIDGE & IRON WORKS

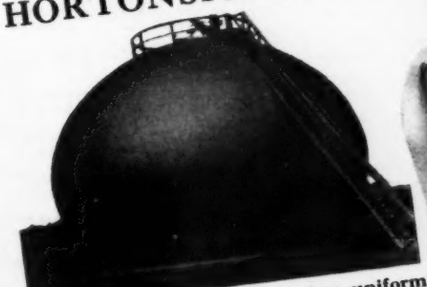
## WIGGINS BREATHER ROOFS

**for standing storage tanks**

Being in effect a flexible steel diaphragm providing a vapor space with a variable volume, this roof stops standing storage loss from tanks that are full or nearly full. It is suitable for standing storage of crude oil or gasoline which does not boil under atmospheric pressure. This roof is especially advantageous on tanks of large diameter where the maximum breathing capacity per square foot of area is attained.

CHICAGO BRIDGE & IRON WORKS

## HORTONSPHEROID



Since a Hortonspheroid has uniform stresses in the shell plates under a combination of full load and internal pressure, it is the ideal shape for moderate pressure units. It is ordinarily built in capacities from 5,000 to 80,000 barrels, and designed for internal pressures of 1 to 20 lbs. per square inch. It is used for storing regular and natural gasolines and stops all evaporation loss when conditions do not exceed those for which the unit was designed.

CHICAGO BRIDGE & IRON WORKS

*Sales Offices at* BIRMINGHAM—BOSTON—CHICAGO—CLEVELAND—DALLAS—DETROIT—HOUSTON—LOS ANGELES—NEW YORK—PHILADELPHIA—SAN FRANCISCO—TULSA. *Plants at* BIRMINGHAM—CHICAGO—GREENVILLE, PA.

# Comparative Assets, Liabilities, Current Position, Capital and

By F. J. SANSONE
Carl H. Pforsheimer & Co.

This study is based on the results of 29 major oil companies whose total assets as of December 31, 1934, were in excess of $7,000,000,000, representing approximately 65 per cent of the American oil industry. Aggregate net income last year, after all charges, of these 29 companies was reported at $157,654,916, compared with $82,319,761 in 1933, an increase of $75,335,155. Combined gross operating income of the group (one company not reporting) was $3,576,196,719 against $2,963,681,061 in the preceding year.

It is of particular interest that with only a 21 per cent advance in gross revenues, net income increased approximately 90 per cent. Based on total indicated invested capital, these earnings were equivalent to a return of approximately 2.7 per cent in 1934 against 1.3 per cent in the preceding year.

Although every member of the group reported larger gross sales, six showed declines in net incomes, while five companies reported deficits in 1934 as against eleven in 1933. Four companies showed losses in both years. In general, corporations engaged chiefly in the production of crude oil made more favorable comparisons with 1933 than did those companies largely interested in refining and marketing activities.

More than half the increase in earnings last year was contributed by three companies: Standard of New Jersey which reported net income of $45,618,900 compared with $25,084,310; Standard of California with $18,327,807 against $7,540,002, and Gulf Oil Corp. which turned a deficit of $11,386,387 in 1933 to a profit of $2,811,183 in 1934. The four largest companies in the group in respect

| | Properties, plant and equipment | Reserves for depreciation, depletion, etc. | Net fixed assets | Permanent investments and advances | Cash and marketable securities | Crude and refined oil inventories | Total current assets | Total assets | Common stock | Preferred stock |
|---|---|---|---|---|---|---|---|---|---|---|
| **Amerada Petroleum Corp.:** | | | | | | | | | | |
| 1934 | $38,228,575 | $29,262,283 | $8,966,292 | $541,593 | $3,693,776 | $504,771 | $5,544,732 | $17,851,780 | $13,581,375 | ..... |
| 1933 | 36,796,019 | 28,219,277 | 8,576,742 | 494,593 | 3,635,072 | 513,978 | 5,599,016 | 17,857,440 | 13,581,375 | ..... |
| **Atlantic Refining Co.:** | | | | | | | | | | |
| 1934 | 191,199,715 | 81,460,402 | 109,739,313 | 7,422,600 | 11,052,289 | 21,227,495 | 46,520,158 | 164,198,838 | 66,622,550 | ..... |
| 1933 | 180,905,872 | 76,416,362 | 104,489,510 | 8,141,599 | 13,901,618 | 18,774,344 | 46,980,078 | 160,139,466 | 66,630,850 | ..... |
| **Barnsdall Corp.:** | | | | | | | | | | |
| 1934 | [2]41,330,753 | [2]26,362,398 | 14,968,355 | 984,464 | 638,468 | 3,359,610 | 6,324,859 | 23,242,184 | 11,027,255 | ..... |
| 1933 | [2]40,664,441 | [2]25,142,008 | 15,522,433 | 2,599,294 | 1,179,805 | 3,676,820 | 7,079,153 | 26,043,043 | 11,293,895 | ..... |
| **Consolidated Oil Corp.:** | | | | | | | | | | |
| 1934 | 264,281,035 | 55,878,234 | 208,402,801 | 22,657,334 | 25,325,865 | 49,718,346 | 93,706,568 | 334,016,280 | 71,094,175 | $10,184,400 |
| 1933 | 243,802,001 | 38,969,205 | 204,832,796 | 21,946,357 | 34,654,138 | 59,325,312 | 112,372,978 | 360,782,343 | 71,094,175 | 10,414,400 |
| **Continental Oil Co.:** | | | | | | | | | | |
| 1934 | 114,373,563 | 73,726,415 | 40,647,153 | 11,619,986 | 6,260,000 | 20,224,951 | 31,466,726 | 85,872,148 | 23,692,967 | ..... |
| 1933 | 111,605,443 | 69,683,373 | 41,922,070 | 11,084,590 | 12,024,648 | 18,636,891 | 35,408,895 | 90,275,542 | 23,692,967 | ..... |
| **Creole Petroleum Corp.:** | | | | | | | | | | |
| 1934 | 70,157,864 | 18,237,776 | 51,920,088 | 424,856 | 322,355 | 419,312 | 6,477,451 | 59,437,657 | 34,871,780 | ..... |
| 1933 | 64,637,924 | 11,582,067 | 52,785,867 | 381,882 | 301,312 | 387,657 | 4,620,452 | 58,257,862 | 34,871,780 | ..... |
| **Gulf Oil Corp.:** | | | | | | | | | | |
| 1934 | 607,925,668 | 328,041,090 | 279,884,578 | 14,257,681 | 22,517,332 | 56,089,790 | 120,382,928 | 421,984,071 | 113,452,525 | ..... |
| 1933 | 588,696,970 | 311,971,102 | 276,725,868 | 35,875,251 | 21,190,093 | 50,273,948 | 109,386,799 | 427,760,331 | 113,452,525 | ..... |
| **Houston Oil Co.:** | | | | | | | | | | |
| 1934 | 58,156,127 | 17,131,164 | 41,024,963 | 6,257,056 | 1,926,970 | 156,590 | 3,390,149 | 51,288,788 | 27,465,450 | 8,947,600 |
| 1933 | 57,207,805 | 15,797,485 | 41,410,320 | 6,168,402 | 1,907,172 | 140,834 | 3,344,537 | 51,655,898 | 27,465,450 | 8,947,600 |
| **Humble Oil & Refining Co.:** | | | | | | | | | | |
| 1934 | 306,579,369 | 113,519,375 | 193,059,994 | 818,154 | 11,075,257 | 19,897,921 | 51,942,840 | 246,377,708 | [9]175,000,000 | ..... |
| 1933 | 289,171,502 | 110,151,002 | 179,020,501 | 6,027,548 | 20,951,219 | 19,935,562 | 61,372,620 | 249,192,083 | 74,880,550 | ..... |
| **Imperial Oil, Ltd.:** | | | | | | | | | | |
| 1934 | 118,694,997 | 60,174,200 | 58,520,797 | 65,024,656 | [20]37,024,569 | 25,221,365 | 75,977,015 | 199,834,217 | 77,263,006 | ..... |
| 1933 | 125,465,614 | 60,411,958 | 65,053,656 | 84,750,144 | 15,489,662 | 25,873,855 | 58,155,046 | 208,790,175 | 76,416,639 | ..... |
| **Mid-Continent Petroleum Corp.:** | | | | | | | | | | |
| 1934 | 89,681,333 | 52,053,815 | 36,947,518 | 3,560,673 | 5,425,786 | 8,256,996 | 17,657,315 | 58,706,875 | [9]18,579,120 | ..... |
| 1933 | 101,408,222 | 50,848,941 | 50,559,281 | 3,335,428 | 5,752,858 | 7,188,368 | 17,098,743 | 71,381,376 | 55,272,302 | ..... |
| **Ohio Oil Co.:** | | | | | | | | | | |
| 1934 | [10]245,982,221 | 150,353,038 | 95,599,183 | 7,374,641 | 10,058,660 | 21,805,197 | 37,455,529 | 174,206,108 | 100,000,000 | 58,094,300 |
| 1933 | [10]257,090,839 | 158,062,710 | 99,028,129 | 7,319,741 | 9,964,155 | 21,038,195 | 36,347,331 | 175,688,991 | 100,000,000 | 58,094,300 |
| **Phillips Petroleum Co.:** | | | | | | | | | | |
| 1934 | 273,617,412 | 136,624,786 | 136,992,626 | 2,099,434 | 6,160,012 | 14,506,680 | 29,022,986 | 169,454,990 | 119,955,563 | ..... |
| 1933 | 269,517,952 | 128,007,430 | 141,510,522 | 2,038,770 | 4,379,430 | 14,837,788 | 26,120,406 | 170,937,222 | 119,996,732 | ..... |
| **Plymouth Oil Co.:** | | | | | | | | | | |
| 1934 | 13,744,361 | 7,690,460 | 6,053,901 | 1,206,404 | 636,551 | 4,566 | 1,255,852 | 12,115,847 | 5,250,000 | ..... |
| 1933 | 13,199,583 | 6,961,463 | 6,238,120 | 1,060,383 | 932,820 | 61,725 | 1,711,486 | 13,476,091 | 5,250,000 | ..... |
| **Pure Oil Co.:** | | | | | | | | | | |
| 1934 | [11]174,045,856 | 85,350,567 | 88,695,289 | 8,071,809 | 2,534,486 | 12,117,503 | 24,537,434 | 144,589,290 | 30,383,700 | 30,000,000 |
| 1933 | [11]164,019,574 | 81,008,200 | 83,011,374 | 11,966,183 | 2,869,377 | 13,519,110 | 25,020,329 | 143,405,744 | 30,383,700 | 30,000,000 |
| **Seaboard Oil Co.:** | | | | | | | | | | |
| 1934 | 8,411,606 | 2,888,602 | 5,523,004 | 2,610,206 | 2,271,659 | 27,769 | 2,824,474 | 11,173,150 | 4,977,532 | ..... |
| 1933 | 8,052,801 | 2,592,400 | 5,460,401 | 2,011,617 | 2,730,215 | 18,827 | 3,210,389 | 10,885,073 | 4,977,532 | ..... |
| **Simms Petroleum Co.:** | | | | | | | | | | |
| 1934 | *** | *** | 3,683,939 | 13,846 | 986,278 | 773,015 | 2,193,497 | 5,939,942 | 4,625,620 | ..... |
| 1933 | *** | *** | 3,943,998 | 15,549 | 655,864 | 1,328,679 | 2,446,797 | 6,464,239 | 4,637,000 | ..... |
| **Skelly Oil Co.:** | | | | | | | | | | |
| 1934 | 89,839,426 | 58,312,133 | 31,527,487 | 2,217,549 | 2,442,293 | 3,419,639 | 8,504,424 | 43,296,280 | 25,213,715 | 6,700,000 |
| 1933 | 84,566,659 | 55,003,353 | 29,563,306 | 1,867,246 | 3,475,587 | 4,005,465 | 10,197,988 | 42,958,760 | 25,213,715 | 7,488,000 |
| **Shell Union Oil Corp.:** | | | | | | | | | | |
| 1934 | 546,552,676 | 286,502,212 | 260,050,464 | 15,622,253 | 14,178,641 | 31,062,306 | 62,932,492 | 347,917,872 | 233,672,821 | 40,000,000 |
| 1933 | 535,561,656 | 265,532,512 | 270,029,144 | 16,463,632 | 28,483,838 | 32,659,164 | 78,399,163 | 374,976,244 | 233,672,821 | 40,000,000 |
| **Socony-Vacuum Oil Co.:** | | | | | | | | | | |
| 1934 | 883,200,882 | 482,996,368 | 400,204,514 | 137,424,007 | 58,630,484 | 121,245,397 | 238,236,596 | 788,600,542 | [14]475,626,818 | ..... |
| 1933 | 838,127,057 | 452,804,731 | 385,322,326 | 113,048,080 | 80,447,328 | 110,086,903 | 248,222,545 | [12]990,061,283 | 792,711,438 | ..... |
| **South Penn Oil Co.:** | | | | | | | | | | |
| 1934 | 113,633,723 | 95,005,355 | 18,628,368 | 7,760,227 | 9,051,190 | 5,749,980 | 16,714,681 | 43,907,262 | 30,000,000 | ..... |
| 1933 | 113,527,114 | 93,746,983 | 19,780,131 | 7,636,075 | 8,144,791 | 6,672,475 | 16,916,425 | 45,122,607 | 30,000,000 | ..... |
| **Standard Oil Co. of California:** | | | | | | | | | | |
| 1934 | 692,489,398 | 255,298,327 | 437,191,071 | 32,234,107 | 21,631,901 | 35,773,758 | 89,069,767 | 569,108,277 | 227,572,500 | ..... |
| 1933 | 689,383,507 | 243,244,149 | 446,139,358 | 23,044,534 | 22,793,397 | 42,429,150 | 92,108,202 | 567,759,054 | 227,572,500 | ..... |
| **Standard Oil Co. of Indiana:** | | | | | | | | | | |
| 1934 | [13]568,361,935 | 292,646,252 | 275,715,683 | 124,601,092 | 65,745,046 | 103,854,255 | 212,817,165 | 660,719,402 | 380,291,942 | ..... |
| 1933 | 597,344,972 | 290,712,119 | 306,632,853 | 136,672,496 | 74,625,279 | 107,650,247 | 224,326,391 | 676,775,808 | 388,212,619 | ..... |
| **Standard Oil Co. of Kansas:** | | | | | | | | | | |
| 1934 | 3,060,217 | 474,025 | 2,586,192 | ..... | 17,507 | 8,036 | 94,793 | 4,548,538 | 2,000,000 | ..... |
| 1933 | 2,531,466 | 290,502 | 2,241,164 | ..... | 252,007 | 5,969 | 273,337 | 4,362,699 | 2,000,000 | ..... |
| **Standard Oil Co. of Kentucky:** | | | | | | | | | | |
| 1934 | 34,217,225 | 15,576,924 | 18,640,291 | ..... | 13,105,048 | 4,294,758 | 20,768,154 | 55,156,759 | 26,047,897 | ..... |
| 1933 | 34,463,580 | 17,044,506 | 17,619,074 | ..... | 13,470,752 | 4,567,470 | 21,820,152 | 56,633,196 | 26,069,834 | ..... |
| **Standard Oil Co. of Nebraska:** | | | | | | | | | | |
| 1934 | *** | *** | 3,163,557 | 1,187,078 | 182,272 | 1,015,414 | 1,362,965 | 5,728,585 | 4,710,075 | ..... |
| 1933 | *** | *** | 3,289,732 | 1,558,897 | 431,526 | 939,767 | 1,602,429 | 6,451,038 | 4,770,550 | ..... |
| **Standard Oil Co. of New Jersey:** | | | | | | | | | | |
| 1934 | 2,196,676,141 | 1,150,147,225 | 1,045,928,816 | 225,321,239 | 227,019,175 | 204,413,981 | 608,939,769 | 1,941,709,974 | 646,402,025 | ..... |
| 1933 | 2,090,681,299 | 1,068,084,109 | 1,022,597,281 | 261,161,366 | 188,783,657 | 171,677,270 | 587,678,392 | 1,912,234,670 | 644,036,625 | ..... |
| **Standard Oil Co. of Ohio:** | | | | | | | | | | |
| 1934 | 56,181,773 | 20,410,119 | 35,771,654 | 4,413,886 | 4,514,238 | 6,411,358 | 13,560,771 | 55,117,493 | 18,843,500 | 12,000,000 |
| 1933 | 55,621,359 | 19,474,589 | 36,146,770 | 4,712,832 | 5,958,984 | 6,214,300 | 15,787,957 | 58,822,721 | 18,843,500 | 12,000,000 |
| **Sun Oil Co.:** | | | | | | | | | | |
| 1934 | 109,804,687 | 47,259,205 | 62,545,482 | 12,120,445 | 5,245,185 | 13,701,142 | 26,912,544 | 103,589,545 | 64,650,522 | 10,000,000 |
| 1933 | 104,084,419 | 43,443,740 | 60,640,679 | 12,078,999 | 5,374,566 | 13,179,656 | 27,353,116 | 101,723,808 | 59,006,338 | 10,000,000 |
| **Texas Corp.:** | | | | | | | | | | |
| 1934 | 565,319,033 | 300,586,622 | 264,733,011 | 39,367,445 | 20,578,178 | 88,191,160 | 151,840,852 | 474,842,418 | 232,744,325 | ..... |
| 1933 | 552,746,697 | 287,133,795 | 265,612,902 | 41,694,200 | 36,730,256 | 87,675,162 | 159,582,264 | 497,419,587 | 246,280,925 | ..... |
| **Tide Water Associated Oil Co.:** | | | | | | | | | | |
| 1934 | 256,772,992 | 143,546,898 | 113,226,094 | 12,645,879 | 13,094,465 | 26,860,485 | 53,587,968 | 179,437,465 | 56,313,410 | 63,622,200 |
| 1933 | 248,655,877 | 134,272,085 | 114,383,792 | 18,946,563 | 12,791,347 | 27,221,797 | 52,872,485 | 186,057,482 | 56,186,720 | 64,202,200 |
| **Union Oil Co. of California:** | | | | | | | | | | |
| 1934 | [10]225,685,706 | 117,729,696 | 107,956,010 | 262,102 | 10,570,555 | 22,615,432 | 41,615,270 | 150,694,182 | 109,651,750 | ..... |
| 1933 | 312,027,938 | 172,288,358 | 139,739,580 | 397,247 | 16,386,385 | 23,954,302 | 48,796,514 | 189,555,242 | 109,651,750 | ..... |
| **TOTAL:** | | | | | | | | | | |
| 1934 | *$8,461,494,238 | *$4,313,344,125 | $4,154,997,609 | $707,485,151 | $594,940,979 | $891,906,614 | $1,967,541,299 | $7,099,014,885 | $3,245,549,132 | $239,588,500 |
| 1933 | *8,332,490,513 | *4,136,755,487 | 4,202,968,646 | 753,344,025 | 625,399,195 | 859,557,995 | 1,988,164,297 | 7,439,687,998 | 3,611,956,838 | 241,238,600 |

NOTE: Totals do not include figures of Humble Oil & Refining Co., Creole Petroleum Corp., and Imperial Oil, Ltd., subsidiaries of Standard Oil Co. of New Jersey.

***Not available from published reports.
* Twenty-seven companies—Standard Oil of Nebraska and Simms Petroleum not reporting.
† Twenty-eight companies—Simms Petroleum not reporting.
‡ Twenty-seven companies—Mid-Continent and Simms Petroleum not reporting.
§ Twenty-eight companies—Standard Oil of Kentucky not reporting.

[1] Represents actual number of shares outstanding and does not include re-acquired or treasury stock.
[2] Plant and equipment only; oil and gas leaseholds are carried at $1.
[3] Depreciation only; lease purchases are charged to expenses.
[4] Deficit or loss.
[5] Includes nonrecurring income of $1,403,168.
[6] Includes $26,977,000 bonds called for payment June 1, 1935.
[7] Includes nonrecurring income of $3,205,336.
[8] Stated value of capital stock reduced to $10 from no par.
[9] Capital surplus of $16,514,419 and $89,485,581 of earned surplus were transferred to capital stock account.
[10] Excluding good will, franchises, etc., amounting to $28,190,399 and $28,189,640 in 1934 and 1933, respectively.

# Earnings of Major Domestic Oil Companies for 1934 and 1933

to total assets showed the greatest amount of earnings and together accounted for more than two-thirds of the total net income of the group. They are, ranking both as to assets and earnings: Standard Oil Co. of New Jersey, Socony-Vacuum Oil Co., Standard Oil Co. (Indiana), and Standard Oil Co. of California.

Total assets of these 29 companies at the end of 1934 aggregated $7,099,014,885 compared with $7,439,687,998 at the end of 1933. The decline indicated was in part due to the policy of oil companies in recent years to reduce the stated or par value of their capital stock, thus creating a capital surplus against which were charged such items as patents, franchises, good will, excess of cost over book value of investments in subsidiaries and appreciation of properties, which had previously been included in assets. In this connection Socony-Vacuum wrote off $228,123,581 during 1934. Another factor has been the conversion of part of fixed assets into cash assets used and to be used for reduction of funded debt.

Fixed assets on December 31, 1934, of the 29 companies totaled $4,154,997,609 after reserves for depreciation, depletion, etc., amounting to $4,313,344,125. This compares with net fixed assets of $4,202,968,646 and reserves of $4,136,755,487 at the end of 1933.

Permanent investments, mainly stocks of or advances to affiliated companies, totaled $707,485,131 compared with $753,344,025 on December 31, 1933.

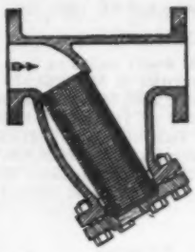
### Current Assets

Total current assets including cash and marketable securities of $594,940,979 and oil inventories of $891,906,614 amounted to $1,967,541,299 on December 31, 1934, while current liabilities were $479,043,154. This compares with $625,399,195, cash and marketable securities; $859,557,995, oil inventories, total current as-

| | Funded debt | Earned surplus | Capital surplus | Total current liabilities | Indicated net working capital | Gross operating income | Depreciation, depletion, etc. | Net income | Net income per common share | [1]Number shares common |
|---|---|---|---|---|---|---|---|---|---|---|
| **Amerada Petroleum Corp.:** | | | | | | | | | | |
| 1934 | ..... | $3,606,129 | ..... | $448,059 | $5,096,673 | $7,441,233 | $2,574,345 | $1,736,420 | $2.20 | 788,675 |
| 1933 | ..... | 3,424,559 | ..... | 656,592 | 4,942,424 | 5,488,211 | 1,830,759 | 380,442 | 0.50 | (No par) |
| **Atlantic Refining Co.:** | | | | | | | | | | |
| 1934 | $14,024,734 | 56,673,672 | $10,118,150 | 8,559,315 | 37,960,843 | 96,117,941 | 9,729,663 | 5,512,106 | 2.07 | 2,664,902 |
| 1933 | 14,046,793 | 54,224,087 | 9,978,510 | 6,964,891 | 40,015,187 | 78,518,610 | 10,176,940 | 6,556,377 | 2.46 | ($25 par) |
| **Barnsdall Corp.:** | | | | | | | | | | |
| 1934 | 318,511 | [3]3,819,154 | 12,915,867 | 2,605,495 | 3,719,364 | 18,035,749 | [21]1,930,290 | [4]1,029,447 | [4]0.47 | 2,205,451 |
| 1933 | 417,555 | [3]2,789,708 | 13,484,898 | 3,318,793 | 3,760,360 | 14,100,771 | [22]2,121,365 | [4]1,942,635 | [4]0.86 | ($5 par) |
| **Consolidated Oil Corp.:** | | | | | | | | | | |
| 1934 | 47,343,016 | 9,391,802 | 166,007,239 | 18,607,190 | 75,099,378 | 168,425,582 | 19,180,523 | 553,282 | [4]0.02 | 13,996,072 |
| 1933 | 53,790,821 | 16,247,951 | 169,986,522 | 19,389,972 | 92,983,006 | 140,550,166 | 18,684,281 | 133,580 | [4]0.05 | (No par) |
| **Continental Oil Co.:** | | | | | | | | | | |
| 1934 | ..... | 4,831,496 | 46,949,207 | 6,076,387 | 25,390,339 | 65,721,348 | 4,605,510 | 4,865,358 | 1.04 | 4,682,722 |
| 1933 | 8,025,409 | 2,275,860 | 46,273,792 | 5,780,098 | 29,628,797 | 52,338,811 | 4,731,971 | [2]2,275,860 | 0.48 | ($5 par) |
| **Creole Petroleum Corp.:** | | | | | | | | | | |
| 1934 | ..... | [4]605,347 | 23,262,912 | 1,303,010 | 5,174,441 | 14,831,960 | 4,413,261 | 5,315,254 | 0.76 | 6,974,356 |
| 1933 | ..... | [4]1,160,459 | 23,262,912 | 1,264,314 | 3,356,138 | 8,314,904 | 2,982,957 | 4,106,099 | 0.59 | ($5 par) |
| **Gulf Oil Corp.:** | | | | | | | | | | |
| 1934 | [6]91,629,847 | 172,590,920 | 17,146,572 | 22,767,922 | 97,615,006 | [23]223,406,133 | 31,192,106 | [7]2,811,183 | 0.62 | 4,538,101 |
| 1933 | 102,462,863 | 173,008,894 | 17,146,572 | 19,212,226 | 90,174,574 | [2]180,966,510 | 32,609,405 | [4]11,386,287 | [4]2.51 | ($25 par) |
| **Houston Oil Co.:** | | | | | | | | | | |
| 1934 | 9,353,500 | 4,836,988 | ..... | 605,250 | 2,784,899 | 5,775,279 | 1,600,089 | 216,990 | [4]0.29 | 1,098,618 |
| 1933 | 9,980,000 | 4,555,843 | ..... | 627,005 | 2,717,532 | 4,854,552 | 1,608,636 | [4]487,178 | [4]0.93 | ($25 par) |
| **Humble Oil & Refining Co.:** | | | | | | | | | | |
| 1934 | 6,831,050 | [8]38,078,400 | ..... | 20,362,636 | 31,580,204 | 129,296,467 | 19,594,340 | 21,989,954 | 2 45 | 8,968,479 |
| 1933 | 18,950,000 | 122,074,152 | 10,331,421 | 14,419,685 | 46,952,935 | 105,056,746 | 15,736,536 | 20,847,818 | 2.33 | (No par) |
| **Imperial Oil, Ltd.:** | | | | | | | | | | |
| 1934 | ..... | 82,414,512 | 15,264,192 | 6,921,796 | 69,005,219 | *** | *** | [24]25,771,654 | 0.96 | 26,919,871 |
| 1933 | ..... | 95,380,999 | 15,264,192 | 8,911,731 | 49,243,315 | *** | *** | [24]14,101,561 | 0.53 | (No par) |
| **Mid-Continent Petroleum Corp.:** | | | | | | | | | | |
| 1934 | ..... | 13,123,889 | 23,769,760 | 2,523,973 | 15,133,342 | 29,131,060 | 4,114,051 | 828,093 | 0.45 | 1,857,912 |
| 1933 | ..... | 13,174,089 | ..... | 2,319,433 | 14,779,310 | *** | 5,119,937 | [4]1,766,438 | [4]0.95 | [9]($10 par) |
| **Ohio Oil Co.:** | | | | | | | | | | |
| 1934 | ..... | 10,789,515 | ..... | 3,714,548 | 33,740,981 | 42,896,319 | 6,906,267 | 5,411,924 | 0.32 | 6,563,377 |
| 1933 | ..... | 11,672,319 | ..... | 3,908,753 | 32,438,578 | 35,355,473 | 6,731,259 | [4]130,016 | [4]0.54 | (No par) |
| **Phillips Petroleum Co.:** | | | | | | | | | | |
| 1934 | [11]26,393,309 | 13,721,113 | ..... | 7,421,751 | 21,601,235 | 77,519,908 | 12,980,605 | 5,757,309 | 1.39 | 4,153,235 |
| 1933 | 29,983,963 | 12,116,812 | ..... | 6,468,258 | 19,652,148 | 62,782,542 | 16,522,030 | 1,500,695 | 0.36 | (No par) |
| **Plymouth Oil Co.:** | | | | | | | | | | |
| 1934 | 500,000 | 3,625,283 | ..... | 836,497 | 419,355 | 3,612,852 | 953,850 | 670,261 | 0.64 | 1,050,000 |
| 1933 | 500,000 | 4,629,562 | ..... | 759,866 | 951,620 | 2,899,476 | 863,249 | 47,598 | 0.05 | ($5 par) |
| **Pure Oil Co.:** | | | | | | | | | | |
| 1934 | 28,500,000 | 8,488,244 | 26,280,377 | 12,361,931 | 12,175,503 | 79,766,991 | 6,938,436 | [4]884,872 | [4]0.97 | 3,038,370 |
| 1933 | 30,500,000 | 9,517,553 | 26,249,106 | 12,215,745 | 12,804,584 | 54,233,383 | 7,108,120 | 455,203 | [4]0.53 | (No par) |
| **Seaboard Oil Co.:** | | | | | | | | | | |
| 1934 | ..... | 982,627 | 434,067 | 500,648 | 2,323,826 | 4,918,641 | 439,119 | 1,375,590 | 1.11 | 1,244,383 |
| 1933 | ..... | 851,420 | 434,067 | 383,935 | 2,826,454 | 3,669,941 | 279,932 | 1,275,565 | 1.03 | (No par) |
| **Simms Petroleum Co.:** | | | | | | | | | | |
| 1934 | ..... | 692,819 | 1,352,481 | 418,082 | 1,775,415 | *** | 458,048 | 161,172 | 0.35 | 462,562 |
| 1933 | ..... | 574,564 | 1,351,409 | 863,200 | 1,583,597 | *** | 571,746 | [4]17,007 | [4]0.04 | ($10 par) |
| **Skelly Oil Co.:** | | | | | | | | | | |
| 1934 | 9,615,679 | [5]5,868,194 | 3,122,252 | 2,662,473 | 5,841,951 | 24,616,568 | 4,616,128 | 713,577 | 0.31 | 1,008,548 |
| 1933 | 9,992,793 | [6]6,581,771 | 2,786,578 | 2,241,913 | 7,956,075 | 19,008,178 | 5,777,162 | [4]820,533 | [4]1.26 | ($25 par) |
| **Shell Union Oil Corp.:** | | | | | | | | | | |
| 1934 | 53,581,227 | [4]18,435,042 | ..... | 23,863,558 | 39,068,934 | 186,707,730 | 30,985,950 | [4]1,352,901 | [4]0.27 | 13,070,625 |
| 1933 | 81,840,456 | [4]17,081,141 | ..... | 21,615,112 | 56,784,051 | 167,011,471 | 29,447,842 | [4]4,240,965 | [4]0.49 | (No par) |
| **Socony-Vacuum Oil Co.:** | | | | | | | | | | |
| 1934 | [12]85,014,584 | 23,652,967 | 114,935,934 | 54,088,126 | 184,148,470 | 469,147,169 | 39,690,119 | 24,121,297 | 0.77 | 31,154,379 |
| 1933 | 83,312,556 | 20,303,891 | 25,652,814 | 39,559,401 | 208,663,144 | 459,469,313 | 36,747,988 | 22,545,462 | 0.73 | ($15 par) |
| **South Penn Oil Co.:** | | | | | | | | | | |
| 1934 | ..... | 10,316,917 | ..... | 1,319,740 | 15,294,941 | 11,539,505 | 1,759,574 | 1,954,919 | 1.63 | 1,200,000 |
| 1933 | ..... | 13,575,686 | ..... | 1,546,921 | 15,369,504 | 9,620,348 | 1,706,745 | 512,913 | 0.43 | ($25 par) |
| **Standard Oil Co. of California:** | | | | | | | | | | |
| 1934 | ..... | 43,785,389 | 167,947,621 | 8,948,924 | 80,120,833 | 130,985,836 | 16,937,174 | 18,327,807 | 1.41 | 13,102,900 |
| 1933 | ..... | 39,362,059 | 174,268,157 | 6,817,910 | 85,290,292 | [13]108,240,000 | 17,143,177 | 7,540,902 | 0.58 | (No par) |
| **Standard Oil Co. of Indiana:** | | | | | | | | | | |
| 1934 | 8,413,670 | 79,388,802 | 146,878,320 | 30,927,270 | 152,889,895 | 278,180,375 | 26,011,274 | 18,949,630 | 1.25 | 15,215,677 |
| 1933 | 7,677,413 | 80,523,587 | 147,523,989 | 32,027,538 | 192,298,853 | 242,532,018 | 29,152,991 | 17,674,351 | 1.14 | ($25 par) |
| **Standard Oil Co. of Kansas:** | | | | | | | | | | |
| 1934 | ..... | 210,951 | 1,969,506 | 368,088 | [4]273,295 | 803,459 | 259,219 | 366,780 | 2.50 | 146,542 |
| 1933 | ..... | 64,988 | 2,037,280 | 260,431 | 112,906 | 538,197 | 146,778 | 77,791 | 0.52 | ($10 par) |
| **Standard Oil Co. of Kentucky:** | | | | | | | | | | |
| 1934 | ..... | 9,110,885 | ..... | 4,006,998 | 16,761,156 | 54,336,363 | *** | 2,599,466 | 1.00 | 2,604,790 |
| 1933 | ..... | 9,559,513 | ..... | 3,583,171 | 18,236,981 | 47,469,305 | *** | 2,458,045 | 0.94 | ($10 par) |
| **Standard Oil Co. of Nebraska:** | | | | | | | | | | |
| 1934 | ..... | 447,930 | 261,299 | 209,280 | 1,053,686 | 5,994,593 | 189,737 | [4]624,314 | [4]3 31 | 188,403 |
| 1933 | ..... | 1,167,663 | 223,134 | 289,691 | 1,312,738 | 5,492,447 | 200,566 | [4]285,233 | [4]1.49 | ($25 par) |
| **Standard Oil Co. of New Jersey:** | | | | | | | | | | |
| 1934 | [15]141,461,816 | [25]368,836,588 | 80,225,617 | 201,774,363 | 407,165,346 | 1,017,972,537 | 111,633,588 | 45,618,960 | 1.76 | 25,856,081 |
| 1933 | 179,398,236 | [25]394,728,890 | 113,117,403 | 150,501,194 | 407,177,198 | 779,766,154 | 111,976,571 | 25,084,310 | 0.97 | ($25 par) |
| **Standard Oil Co. of Ohio:** | | | | | | | | | | |
| 1934 | 266,800 | 8,839,914 | 4,345,071 | 4,890,690 | 8,670,081 | 54,822,249 | 2,298,624 | [4]1,913,735 | [4]3.34 | 753,740 |
| 1933 | 305,856 | 11,600,638 | 4,345,071 | 5,186,987 | 10,600,970 | 52,033,229 | 2,621,680 | [4]823,357 | [4]1.39 | ($25 par) |
| **Sun Oil Co.:** | | | | | | | | | | |
| 1934 | 6,500,000 | 9,609,319 | ..... | 10,662,079 | 16,250,465 | 82,667,367 | 7,044,221 | 6,650,464 | 3.19 | 1,893,983 |
| 1933 | 10,541,000 | 10,778,750 | ..... | 9,218,482 | 18,134,634 | 66,223,753 | 6,277,922 | 6,971,844 | 3.68 | (No par) |
| **Texas Corp.:** | | | | | | | | | | |
| 1934 | 103,600,076 | 56,402,269 | 46,830,683 | 32,468,389 | 119,372,462 | 272,618,752 | 28,941,894 | 5,545,205 | 0.59 | 9 349,773 |
| 1933 | 104,092,777 | 63,900,708 | 47,711,804 | 33,508,566 | 126,073,698 | 231,789,680 | 33,014,255 | [4]491,004 | [4]0.05 | ($25 par) |
| **Tide Water Associated Oil Co.:** | | | | | | | | | | |
| 1934 | ..... | 20,620,669 | ..... | 9,667,408 | 41,220,500 | 95,666,725 | 12,636,581 | 5,810,657 | 0.35 | 5,631,341 |
| 1933 | 5,717,000 | 20,967,674 | ..... | 9,631,159 | 43,241,326 | 87,602,969 | 13,185,100 | 7,265,301 | 0 61 | (No par) |
| **Union Oil Co. of California:** | | | | | | | | | | |
| 1934 | 21,489,500 | 10,215,105 | 3,699,117 | 5,638,710 | 35,976,560 | 57,368,455 | 6,674,266 | 2,902,733 | 0.66 | 4,386,070 |
| 1933 | 26,687,000 | 11,736,646 | 35,323,483 | 6,156,363 | 42,640,151 | 51,125,553 | 6,665,513 | 1,954,279 | 0.45 | ($25 par) |
| **TOTAL:** | | | | | | | | | | |
| 1934 | $648,006,269 | $916,669,812 | $875,189,134 | $479,043,154 | $1,488,495,145 | †$3,576,196,719 | ‡$393,281,341 | $157,654,916 | .... | ..... |
| 1933 | 759,272,491 | 968,111,586 | 837,894,589 | 405,013,605 | 1,583,150,692 | ‡2,963,681,061 | $403,173,926 | 82,319,761 | .. | ..... |

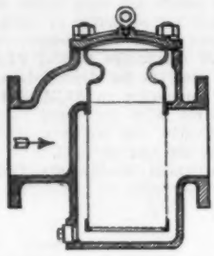
[1] Includes $5,000,000 debentures called for payment June 1, 1935.
[2] Excluding contracts, patents, trademarks, etc., amounting to $19,760,816 and $19,591,002 in 1934 and 1933, respectively.
[3] Includes good will and appreciation of properties amounting to $228,123,581, which was written off during 1934.
[4] Par value reduced to $15 a share from $25.
[5] Estimated from company's statement that gross in 1934, which was shown for the first time, was approximately 21 per cent over 1933.
[6] Excluding excess of cost over book value of investments in subsidiaries and good will, patents, etc., amounting to $38,080,164 not reported separately in 1933.
[7] Includes $28,615,000 General Petroleum and S.O.N.Y. debentures redeemed on February 15, 1935.
[8] Includes $30,000,000 S.O.N.J. debentures retired on February 1, 1935, and $5,445,010 Anglo-American Oil Co., Ltd., debenture stock called for payment July 15, 1935.
[9] Appreciation of proven oil properties shown at $21,624,366 in 1933 was deducted in 1934.
[10] Includes $22,078,932 marketable securities; in 1933 included in investments.
[11] Includes dividends from subsidiary companies and other income of $20,560,185 and $9,408,846 in 1934 and 1933, respectively.
[12] Includes appropriated surplus of $15,978,550 and $17,546,499 in 1934 and 1933, respectively.
[13] Includes $42,273,262 federal gasoline and lubricating oil taxes paid in 1934 and $39,233,675 in 1933.

# STRAINERS



- STEAM
- WATER
- OIL
- GAS
- AIR

SERVICE



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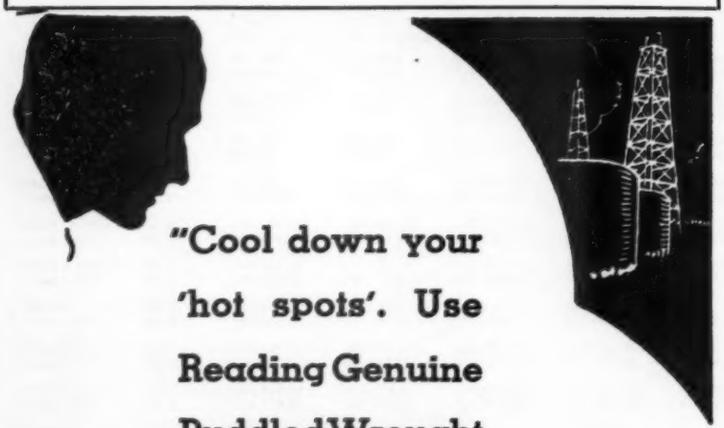

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SCIENCE AND INVENTION HAVE NEVER FOUND A SATISFACTORY SUBSTITUTE FOR GENUINE PUDDLED WROUGHT IRON


sets of $1,988,164,207 and total current liabilities of $405,013,605, at the close of the preceding year. The ratio of current assets to current liabilities December 31, 1934, was 4.1, while a year before it was 4.9.

A factor in the lower current asset ratio is the reduction of approximately $111,000,000 in the total funded and long term debt of these corporations. Ability of oil companies to avail themselves of the abundance of cheap money in order to retire or refinance bond issues at lower rates of interest gives testimony to their financial strength and credit standing.

Approximately $300,000,000 of oil company bonds have either been redeemed or called for payment since the beginning of 1934. Among the larger companies which have either paid off or called for redemption substantial amounts of bonds are the Standard of New Jersey, Gulf Oil Corp., Socony-Vacuum and Shell Union.

Total common stock capitalization of these companies amounted to $3,245,549,132 in 1934 compared with $3,611,956,838 in 1933, the decrease being chiefly caused by the reduction in the par value of Socony-Vacuum's common stock to $15 from $25. Of the 29 companies 9 had outstanding preferred stock totaling $239,588,500 or slightly lower than at the end of 1933.

The combined surplus accounts at December 31, 1934, showed total earned surplus of $916,669,812 and capital surplus of $875,189,134, compared with earned surplus of $968,111,586 and capital surplus of $837,894,589 on December 31, 1933.

The accompanying table gives the comparative assets, liabilities, current position, capitalization and earnings of 29 major domestic oil companies together with figures for Imperial Oil, Ltd., Creole Petroleum Corp., and Humble Oil & Refining Co. Since these three subsidiaries of the Standard of New Jersey are included in the latter's consolidated reports, they are not included in the totals.

**INCOME AND BALANCE SHEET TOTALS OF 29 MAJOR DOMESTIC OIL COMPANIES**

| Assets— | 1934 | 1933 |
|---|---|---|
| Properties, plant and equipment | *$8,461,494,238 | *$8,332,490,513 |
| Reserves for depreciation, depletion, etc. | *4,313,344,125 | *4,136,755,487 |
| Net fixed assets | 4,154,997,609 | 4,202,968,646 |
| Permanent investments and advances | 707,485,131 | 753,344,025 |
| Cash and marketable securities | 594,940,979 | 625,399,195 |
| Crude and refined oil inventories | 891,906,614 | 859,557,995 |
| Total current assets | 1,967,541,299 | 1,988,164,297 |
| Total assets | 7,099,014,885 | 7,439,687,998 |
| Liabilities— | | |
| Common stock | 3,245,549,132 | 3,611,956,838 |
| Preferred stock | 239,588,500 | 241,238,600 |
| Funded and long term debt | 648,006,269 | 759,272,491 |
| Earned surplus | 916,669,812 | 968,111,586 |
| Capital surplus | 875,189,134 | 837,894,589 |
| Total current liabilities | 479,043,154 | 405,013,605 |
| Indicated total invested capital | 5,925,002,847 | 6,418,474,104 |
| Indicated net working capital | 1,488,498,145 | 1,583,150,692 |
| Income account— | | |
| Gross operating income | †3,576,196,719 | ‡2,963,681,061 |
| Depreciation, depletion, etc. | §393,281,341 | §403,173,920 |
| Net income | 157,654,916 | 82,319,761 |

*27 companies, S.O. Nebraska and Simms Petroleum not reporting.
†28 companies, Simms Petroleum not reporting.
‡27 companies, Mid-Continent and Simms Petroleum not reporting.
§28 companies, S.O. Kentucky not reporting.

## Gulf Coast Water Shipments for March

| Company, terminal— | Crude Coastwise | Crude Export | Refined Coastwise | Refined Export | Total |
|---|---|---|---|---|---|
| Atlantic Pipe Line Co.: | | | | | |
| Atreco | 1,706,476.86 | 128,548.88 | 2,725.33 | ..... | 1,837,751.07 |
| Texas City | 278,814.74 | ..... | 7,417.38 | ..... | 286,232.12 |
| Harbor Island | 481,004.25 | ..... | ..... | ..... | 481,004.25 |
| Gulf Refining Co.: | | | | | |
| Port Arthur | 288,244.25 | ..... | 2,616,565.28 | 18,597.84 | 2,923,407.37 |
| Humble Oil & Ref. Co.: | | | | | |
| Baytown | 1,214,460.73 | ..... | 2,355,571.35 | 402,723.13 | 3,972,755.21 |
| Harbor Island | 1,805,310.95 | 57,562.71 | ..... | ..... | 1,862,873.66 |
| Texas City | 1,124,697.24 | ..... | ..... | ..... | 1,124,697.24 |
| Magnolia Pet. Co.: | | | | | |
| Beaumont | 944,357.73 | ..... | 1,945,254.76 | ..... | 2,889,612.49 |
| Pure Oil Co.: | | | | | |
| Smith's Bluff | 323,168.00 | ..... | 818,153.00 | ..... | 1,141,321.00 |
| Shell Petroleum Co.: | | | | | |
| Houston | 204,750.98 | ..... | 1,005,806.09 | 177,388.18 | 1,387,945.25 |
| Norco | ..... | ..... | 422,724.61 | ..... | 422,724.61 |
| Standard Oil Co. of La.: | | | | | |
| Baton Rouge | 398,366.00 | ..... | 1,238,438.00 | 88,689.00 | 1,825,493.00 |
| Sun Oil Co.: | | | | | |
| Sabine Pass and Sun | 1,764,058.49 | ..... | ..... | ..... | 1,764,058.49 |
| The Texas Co.: | | | | | |
| Port Arthur | 1,454,462.00 | 331,385.00 | 2,407,396.00 | 607,105.00 | 4,800,348.00 |
| Miscellaneous: | | | | | |
| Houston | 1,060,688.49 | 289,263.80 | 1,352,473.96 | 130,450.09 | 2,832,876.34 |
| Total March | 13,048,860.71 | 806,760.39 | 14,272,525.76 | 1,424,953.24 | 29,553,100.10 |
| Total February | 13,085,032.65 | 831,955.78 | 16,754,803.39 | 2,003,581.53 | 32,675,373.35 |
| Difference | 36,171.94 | 25,195.39 | 2,482,277.63 | 578,628.29 | 3,122,273.25 |

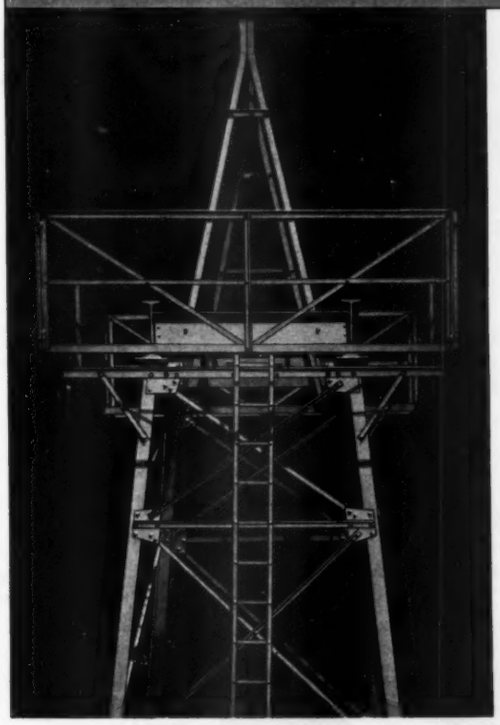
**STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA OIL COMPANIES**

| | Apr. 30, 1935 | Mar. 31, 1935 | Apr. changes | Apr. 30, 1934 |
|---|---|---|---|---|
| 1. Non-gasoline-bearing crude, residuum, gas and Diesel oils | 63,943,648 | 64,586,972 | —643,324 | 82,416,946 |
| 2. Gasoline-bearing crude | 35,388,802 | 36,892,740 | —1,503,938 | 35,658,654 |
| 3. Unblended natural gasoline | 2,911,827 | 2,896,470 | +15,357 | 2,462,175 |
| 4. Gasoline (not including distributing and service stations) | 10,188,778 | 10,936,972 | —748,194 | 12,813,298 |
| 5. Naphtha distillates | *1,147,891 | *1,105,673 | +42,218 | *1,087,446 |
| 6. All other stocks | †8,079,539 | †7,826,062 | +253,477 | †6,771,065 |
| Total | 121,660,485 | 124,244,889 | —2,584,404 | 141,214,584 |
| *Estimated amount of unfinished gasoline contained in Item No. 5 | 937,990 | 904,051 | | 944,499 |
| †Coke included in Item No. 6 | 534,330 | 549,083 | | 619,514 |

# From Top to Bottom!

# M.I.W.

## STEEL DERRICKS



Top of M.I.W. Derrick showing Gin Pole, Crows Nest, Water Table and Spreaders.

## are CORRECT IN EVERY DETAIL

From Sub-Structure to Gin Pole, M.I.W. Steel Derricks are built for maximum loads and greatest safety. They characterize the engineering correctness of their design —skilled workmanship and high quality of materials, made possible only through long experience and adequate plant facilities.

Distinctive construction features of M.I.W. Derricks include:

1 Fewer Pieces
2 Less Bolts
3 Quicker Erection
4 Milled Joints
5 2-Bolt Connections
6 Absolutely Safe Ladders
7 Silicon Steel Legs
8 Splice Plates—Spot Welded
9 Gin Poles Specially Locked in Place
10 Bolts—Hot Dip Galvanized. Fin Heads—Free Running Rolled Threads
11 Parkerized Washers

We carry a complete line of A.P.I. Steel Derricks, Rig Fronts and Sub-Structures for immediate shipment.

# MUSKOGEE IRON WORKS

STEEL DESIGNERS — MIW — FABRICATORS — ERECTORS

1115 First Nat'l Bank Bldg.
Dallas, Texas

Main Office and Plant
Muskogee, Oklahoma

807 Marine Bldg.
Houston, Texas

# Summary of Operations in All Fields for April, 1935

### SUMMARY OF ALL FIELDS

**Wells Completed**

| | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Pennsylvania Grade | 211 | 203 | 16 | 37 |
| Lima | 6 | 0 | 2 | 3 |
| Central Ohio | 54 | 51 | 15 | 32 |
| Indiana | 14 | 60 | 4 | 8 |
| Kentucky | 21 | 540 | 3 | 2 |
| Michigan | 25 | 6,139 | 6 | 11 |
| Kansas | 100 | 56,297 | 15 | 3 |
| Oklahoma | 153 | 59,310 | 46 | 6 |
| North Central Texas | 220 | 10,573 | 93 | 2 |
| West Texas | 66 | 24,293 | 19 | 1 |
| Texas Panhandle | 57 | 29,336 | 5 | 7 |
| East Central Texas | 21 | 1,468 | 9 | 4 |
| East Texas | 409 | 23,425 | 9 | 0 |
| East Texas (gas field) | 1 | 0 | 1 | 0 |
| Gulf Coast Texas | 101 | 10,532 | 48 | 4 |
| Southwest Texas | 110 | 23,085 | 28 | 3 |
| North Louisiana | 29 | 498 | 9 | 11 |
| Gulf Coast Louisiana | 37 | 13,338 | 18 | 2 |
| Arkansas | 9 | 177 | 7 | 0 |
| Mississippi | 1 | 0 | 0 | 1 |
| Montana | 9 | 610 | 2 | 1 |
| New Mexico | 22 | 60,375 | 2 | 0 |
| Wyoming | 5 | 5,025 | 2 | 1 |
| Total April | 1,681 | 335,236 | 360 | 129 |
| Total March | 1,581 | 572,442 | 324 | 105 |
| Difference | 100 | 237,206 | 36 | 24 |

**Rigs and Wells Drilling**

| | Rigs | Drlg. | Ttl. |
|---|---|---|---|
| Pennsylvania Grade | 68 | 239 | 307 |
| Lima | 7 | 31 | 38 |
| Central Ohio | 38 | 122 | 160 |
| Indiana | 0 | 36 | 36 |
| Illinois | 0 | 8 | 8 |
| Kentucky | 0 | 13 | 13 |
| Michigan | 130 | 140 | 270 |
| Kansas | 53 | 221 | 274 |
| Oklahoma | 99 | 452 | 551 |
| North Central Texas | 88 | 237 | 325 |
| West Texas | 62 | 171 | 233 |
| Texas Panhandle | 43 | 151 | 194 |
| East Central Texas | 17 | 38 | 55 |
| East Texas | 120 | 236 | 356 |
| East Texas (gas field) | 3 | 13 | 16 |
| Gulf Coast Texas | 47 | 131 | 178 |
| Southwest Texas | 27 | 135 | 162 |
| North Louisiana | 20 | 62 | 82 |
| Gulf Coast Louisiana | 24 | 74 | 98 |
| Arkansas | 13 | 44 | 57 |
| Alabama | 1 | 3 | 4 |
| Mississippi | 4 | 13 | 17 |
| Montana | 17 | 48 | 65 |
| Wyoming | 10 | 65 | 75 |
| Colorado | 2 | 29 | 31 |
| New Mexico | 27 | 87 | 114 |
| Utah | 1 | 13 | 14 |
| Total April | 921 | 2,802 | 3,723 |
| Total March | 816 | 2,554 | 3,370 |
| Difference | 105 | 248 | 353 |

## Oklahoma Fields

**Summary of Completed Wells**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Carter | 8 | 213 | 4 | 0 |
| Stephens | 12 | 59 | 7 | 0 |
| Jefferson | 1 | 25 | 0 | 0 |
| Garvin | 3 | 0 | 2 | 0 |
| Jackson | 7 | 88 | 5 | 0 |
| Grady | 3 | 5 | 2 | 0 |
| Marshall | 6 | 68 | 0 | 0 |
| Murray | 4 | 0 | 4 | 0 |
| Pontotoc | 16 | 12,242 | 1 | 0 |
| Seminole | 20 | 8,196 | 4 | 1 |
| Pottawatomie | 17 | 3,019 | 5 | 0 |
| Pittsburg | 1 | 0 | 0 | 1 |
| McIntosh | 1 | 0 | 0 | 1 |
| Hughes | 2 | 0 | 1 | 1 |
| Caddo | 0 | 80 | 0 | 0 |
| Oklahoma | 6 | 10,217 | 0 | 0 |
| Okmulgee | 2 | 25 | 1 | 1 |
| Creek | 7 | 260 | 0 | 1 |
| Logan | 4 | 12,571 | 1 | 0 |
| Noble | 4 | 5,068 | 0 | 0 |
| Osage | 26 | 7,169 | 6 | 0 |
| Muskogee | 1 | 5 | 0 | 0 |
| Garfield | 1 | 0 | 1 | 0 |
| Pawnee | 1 | 0 | 1 | 0 |
| Total April | 152 | 59,110 | 46 | 6 |
| Total March | 114 | 267,155 | 38 | 8 |
| Difference | 49 | 207,845 | 8 | 2 |

**The difference in initial production in the two months was caused by the fact that in the March report the "potential" 24-hour production of wells in the Fitts Pool is given while in April the actual average 3½-hour initial production is given for wells completed in the same field.**

**Rigs and Wells Drilling**

| County— | Rigs | Drlg. | Ttl. |
|---|---|---|---|
| Murray | 0 | 2 | 2 |
| Coal | 1 | 1 | 2 |
| Atoka | 1 | 11 | 12 |
| Carter | 1 | 14 | 15 |
| Stephens | 1 | 20 | 21 |
| Cotton | 0 | 1 | 1 |
| Tillman | 0 | 2 | 2 |
| Jackson | 2 | 16 | 18 |
| Pushmataha | 0 | 1 | 1 |
| Jefferson | 0 | 6 | 6 |
| Marshall | 0 | 8 | 8 |
| Love | 0 | 1 | 1 |
| McCurtain | 0 | 1 | 1 |
| Choctaw | 1 | 0 | 1 |
| Bryan | 0 | 2 | 2 |
| Garvin | 1 | 2 | 3 |
| Pontotoc | 11 | 62 | 73 |
| Comanche | 0 | 6 | 6 |
| Grady | 1 | 5 | 6 |
| Harmon | 0 | 1 | 1 |
| Pittsburg | 0 | 3 | 3 |
| Greer | 0 | 5 | 5 |
| Pottawatomie | 8 | 25 | 33 |
| Hughes | 3 | 11 | 14 |
| Seminole | 10 | 35 | 45 |
| Caddo | 1 | 2 | 3 |
| Kiowa | 2 | 3 | 5 |
| Washita | 0 | 1 | 1 |
| Beckham | 0 | 2 | 2 |
| Okfuskee | 5 | 16 | 21 |
| Cleveland | 0 | 1 | 1 |
| Oklahoma | 13 | 28 | 41 |
| Okmulgee | 1 | 1 | 2 |
| Lincoln | 2 | 12 | 14 |
| Canadian | 0 | 1 | 1 |
| Creek | 3 | 48 | 51 |
| Logan | 3 | 16 | 19 |
| Blaine | 0 | 1 | 1 |
| Payne | 0 | 1 | 1 |
| Pawnee | 0 | 3 | 3 |
| Osage | 26 | 49 | 75 |
| Noble | 1 | 13 | 14 |
| Ellis | 0 | 1 | 1 |
| Garfield | 0 | 1 | 1 |
| Kay | 0 | 8 | 8 |
| Alfalfa | 0 | 1 | 1 |
| Grant | 1 | 0 | 1 |
| Texas | 0 | 1 | 1 |
| Total April | 99 | 453 | 551 |
| Total March | 83 | 454 | 537 |
| Difference | 16 | 2 | 14 |

## Kansas Fields

**Summary of Completed Wells**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Russell | 18 | 7,864 | 3 | 0 |
| Ellsworth | 4 | 4,122 | 0 | 1 |
| Marion | 1 | 0 | 1 | 0 |
| McPherson | 7 | 2,671 | 2 | 0 |
| Rice | 17 | 12,819 | 1 | 0 |
| Ness | 1 | 0 | 1 | 0 |
| Rush | 1 | 0 | 1 | 0 |
| Harvey | 5 | 648 | 0 | 0 |
| Reno | 22 | 25,028 | 1 | 1 |
| Sedgwick | 4 | 1,032 | 1 | 0 |
| Butler | 7 | 828 | 3 | 0 |
| Sumner | 4 | 1,148 | 0 | 0 |
| Elk | 2 | 15 | 0 | 0 |
| Greenwood | 4 | 60 | 1 | 1 |
| Woodson | 2 | 62 | 0 | 0 |
| Total April | 100 | 56,297 | 15 | 3 |
| Total March | 95 | 83,154 | 28 | 5 |
| Difference | 5 | 26,857 | 13 | 2 |

**Rigs and Wells Drilling**

| County— | Rigs | Drlg. | Ttl. |
|---|---|---|---|
| Rooks | 0 | 4 | 4 |
| Russell | 10 | 37 | 47 |
| Trego | 1 | 3 | 4 |
| Ellis | 0 | 2 | 2 |
| Saline | 0 | 1 | 1 |
| Dickinson | 0 | 1 | 1 |
| Ellsworth | 7 | 10 | 17 |
| Barton | 5 | 9 | 14 |
| Marion | 0 | 2 | 2 |
| McPherson | 5 | 23 | 28 |
| Rush | 1 | 3 | 4 |
| Rice | 7 | 34 | 41 |
| Ness | 0 | 1 | 1 |
| Scott | 0 | 1 | 1 |
| Harvey | 4 | 7 | 11 |
| Reno | 6 | 34 | 40 |
| Pawnee | 0 | 1 | 1 |
| Greenwood | 3 | 6 | 9 |
| Stafford | 0 | 1 | 1 |
| Butler | 2 | 13 | 15 |
| Sedgwick | 0 | 9 | 9 |
| Sumner | 0 | 5 | 5 |
| Kingman | 1 | 0 | 1 |
| Barber | 1 | 2 | 3 |
| Elk | 0 | 4 | 4 |
| Osage | 0 | 1 | 1 |
| Morris | 0 | 2 | 2 |
| Woodson | 0 | 3 | 3 |
| Clay | 0 | 2 | 2 |
| Total April | 53 | 221 | 274 |
| Total March | 50 | 222 | 272 |
| Difference | 3 | 1 | 2 |

## East Central Texas Fields

**Summary of Wells Completed**

| County— | Comp. | Prod. | Abd. | Gas |
|---|---|---|---|---|
| Anderson | 8 | 1,344 | 2 | 2 |
| Falls | 1 | 0 | 1 | 0 |
| Freestone | 1 | 0 | 0 | 1 |
| Gregg | 181 | 11,005 | 2 | 0 |
| Limestone | 1 | 0 | 0 | 1 |
| Morris | 2 | 0 | 2 | 0 |
| Navarro | 1 | 8 | 1 | 0 |
| Rusk | 134 | 7,269 | 4 | 0 |
| Smith | 49 | 2,709 | 3 | 0 |
| Upshur | 45 | 2,442 | 0 | 0 |
| Van Zandt | 6 | 124 | 2 | 0 |
| Wood | 1 | 0 | 1 | 0 |
| Total April | 430 | 24,893 | 18 | 4 |
| Total March | 475 | 24,637 | 22 | 1 |
| Difference | 45 | 256 | 4 | 3 |

**Summary of Rigs and Wells Drilling**

| County— | Rgs. | S.D. | Dlg. | Ttl. |
|---|---|---|---|---|
| Anderson | 9 | 0 | 7 | 16 |
| Bowie | 0 | 1 | 0 | 1 |
| Cherokee | 1 | 4 | 1 | 6 |
| Ellis | 0 | 0 | 1 | 1 |
| Falls | 0 | 1 | 0 | 1 |
| Fannin | 0 | 0 | 1 | 1 |
| Freestone | 1 | 0 | 0 | 1 |
| Gregg | 67 | 3 | 80 | 150 |
| Harrison | 2 | 4 | 0 | 6 |
| Henderson | 0 | 1 | 2 | 3 |
| Hunt | 0 | 1 | 1 | 2 |
| Kaufman | 0 | 2 | 1 | 3 |
| Limestone | 1 | 3 | 1 | 5 |
| Morris | 0 | 2 | 0 | 2 |
| Nacogdoches | 1 | 1 | 1 | 2 |
| Navarro | 0 | 2 | 0 | 2 |
| Red River | 1 | 1 | 0 | 2 |
| Rusk | 32 | 1 | 93 | 126 |
| Smith | 11 | 2 | 23 | 37 |
| Titus | 1 | 0 | 0 | 1 |
| Upshur | 9 | 3 | 25 | 37 |
| Van Zandt | 1 | 1 | 3 | 5 |
| Total April | 137 | 34 | 240 | 411 |
| Total March | 102 | 39 | 252 | 393 |
| Difference | 35 | 5 | 12 | 18 |

## Southwest Texas Fields

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Angelita | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Barbacoas | 1 | 450 | 0 | 0 | 0 | 0 | 0 |
| Bruni | 5 | 2,394 | 0 | 0 | 0 | 4 | 4 |
| Burnel | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Caesar | 2 | 1,248 | 0 | 0 | 2 | 4 | 6 |
| Cooksey | 1 | 12 | 0 | 0 | 0 | 0 | 0 |
| West Cole | 5 | 210 | 1 | 0 | 0 | 4 | 4 |
| North Dale | 2 | 360 | 0 | 0 | 0 | 0 | 0 |
| Dinero | 1 | 350 | 0 | 0 | 0 | 0 | 0 |
| Dirks | 1 | 195 | 0 | 0 | 1 | 0 | 1 |
| Escobas | 2 | 20 | 0 | 0 | 0 | 1 | 1 |
| Floresville | 1 | 20 | 0 | 0 | 0 | 0 | 0 |
| Sam Fordyce | 9 | 685 | 2 | 0 | 2 | 5 | 7 |
| Govt. Wells | 8 | 390 | 2 | 2 | 6 | 3 | 9 |
| Grayburg | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Hoffman | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Jacobs | 3 | 200 | 0 | 0 | 0 | 2 | 2 |
| Jennings | 2 | 60 | 1 | 0 | 0 | 0 | 0 |
| Kingsville | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| N. Kohler | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Laurel | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Loma Novia | 3 | 6,950 | 1 | 0 | 1 | 4 | 5 |
| Los Olmos | 2 | 0 | 2 | 0 | 0 | 0 | 0 |
| Lucas | 1 | 70 | 0 | 0 | 0 | 1 | 1 |
| McNeil | 1 | 512 | 0 | 0 | 0 | 0 | 0 |
| Mercedes | 1 | 252 | 0 | 0 | 0 | 0 | 0 |
| Noack | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Pearsall | 1 | 840 | 0 | 0 | 0 | 0 | 0 |
| Placetas | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Rio Grande City | 3 | 100 | 2 | 0 | 0 | 0 | 0 |
| Ray | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Sandia | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| Sarnosa | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Seeligson | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Saxet | 1 | 0 | 0 | 1 | 0 | 2 | 2 |
| East Sinton | 1 | 264 | 0 | 0 | 1 | 0 | 1 |
| Sinton | 1 | 150 | 0 | 0 | 0 | 0 | 0 |
| West Tuleta | 5 | 975 | 0 | 0 | 1 | 6 | 7 |
| Von Ormy | 5 | 0 | 5 | 0 | 0 | 2 | 2 |
| Miscellaneous | 29 | 0 | 29 | 0 | 10 | 77 | 87 |
| Total Apr. | 101 | 10,532 | 48 | 4 | 27 | 125 | 152 |
| Total Mar. | 107 | 19,732 | 33 | 12 | 42 | 159 | 201 |
| Difference | 6 | 9,190 | 15 | 8 | 15 | 34 | 49 |

## North Central Texas Fields

**Summary of Wells Completed**

| County— | Comp. | Prod. | Abd. | Gas |
|---|---|---|---|---|
| Archer | 76 | 5,075 | 28 | 0 |
| Baylor | 2 | 310 | 0 | 0 |
| Brown | 6 | 75 | 3 | 0 |
| Callahan | 4 | 10 | 3 | 0 |
| Clay | 1 | 0 | 1 | 0 |
| Coleman | 4 | 55 | 2 | 0 |
| Cooke | 10 | 1,372 | 4 | 0 |
| Eastland | 3 | 110 | 1 | 0 |
| Grayson | 1 | 0 | 1 | 0 |
| Jack | 0 | 5 | 1 | 0 |
| Lampasas | 1 | 0 | 1 | 0 |
| Montague | 9 | 1,069 | 2 | 0 |
| Palo Pinto | 2 | 0 | 0 | 2 |
| Shackelford | 10 | 202 | 5 | 0 |
| Stephens | 1 | 0 | 1 | 0 |
| Throckmorton | 3 | 0 | 3 | 0 |
| Wichita | 35 | 1,516 | 14 | 0 |
| Wilbarger | 3 | 20 | 1 | 0 |
| Young | 40 | 754 | 32 | 0 |
| Total April | 220 | 10,573 | 93 | 2 |
| Total March | 222 | 12,040 | 96 | 5 |
| Difference | 2 | 1,467 | 3 | 3 |

**Summary of Rigs and Wells Drilling**

| County— | Rigs | S.D. | Drlg. | Ttl. |
|---|---|---|---|---|
| Archer | 26 | 19 | 44 | 89 |
| Baylor | 3 | 0 | 4 | 7 |
| Brown | 1 | 4 | 6 | 11 |
| Callahan | 1 | 2 | 1 | 4 |
| Clay | 2 | 1 | 0 | 3 |
| Coleman | 0 | 3 | 1 | 4 |
| Cooke | 5 | 6 | 11 | 22 |
| Denton | 1 | 0 | 2 | 3 |
| Eastland | 1 | 3 | 4 | 8 |
| Erath | 0 | 0 | 2 | 2 |
| Foard | 0 | 0 | 1 | 1 |
| Grayson | 0 | 1 | 2 | 3 |
| Hardeman | 0 | 1 | 2 | 3 |
| Hamilton | 0 | 0 | 1 | 1 |
| Jack | 2 | 3 | 5 | 10 |
| Mills | 0 | 2 | 0 | 2 |
| Montague | 9 | 3 | 5 | 17 |
| Palo Pinto | 0 | 0 | 1 | 1 |
| Parker | 0 | 1 | 3 | 4 |
| Shackelford | 8 | 2 | 19 | 29 |
| Stephens | 2 | 1 | 1 | 4 |
| Tarrant | 0 | 1 | 0 | 1 |
| Throckmorton | 0 | 0 | 2 | 2 |
| Wichita | 9 | 1 | 15 | 25 |
| Wilbarger | 3 | 4 | 4 | 11 |
| Wise | 1 | 0 | 3 | 4 |
| Young | 14 | 8 | 32 | 54 |
| Total April | 88 | 66 | 171 | 325 |
| Total March | 76 | 62 | 143 | 281 |
| Difference | 12 | 4 | 28 | 44 |

## West Texas Fields

**Summary of Wells Completed**

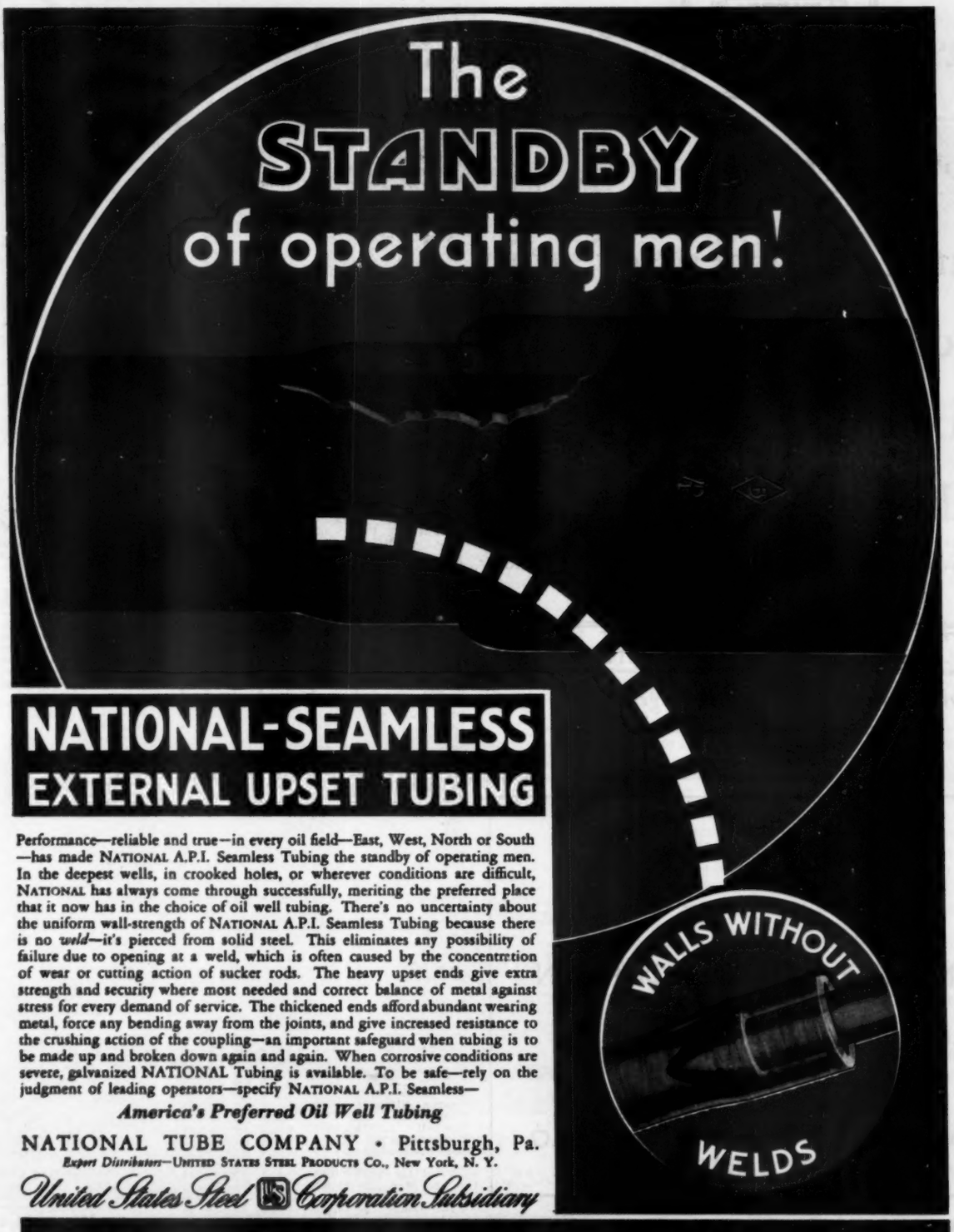
| County— | Comp. | Prod. | Abd. | Gas |
|---|---|---|---|---|
| Andrews | 4 | 2,573 | 2 | 0 |
| Crane | 3 | 2,166 | 0 | 0 |
| Ector | 2 | 722 | 0 | 0 |
| Fisher | 2 | 1,050 | 0 | 0 |
| Glasscock | 3 | 576 | 0 | 0 |
| Howard | 9 | 2,071 | 2 | 0 |
| Irion | 1 | 27 | 0 | 0 |
| Jones | 7 | 0 | 7 | 0 |
| McCulloch | 1 | 0 | 1 | 0 |
| Pecos | 5 | 3,664 | 1 | 0 |
| Runnels | 2 | 0 | 2 | 0 |
| Scurry | 1 | 0 | 1 | 0 |
| Tom Green | 1 | 0 | 1 | 0 |
| Terrell | 1 | 0 | 1 | 0 |
| Upton | 4 | 1,803 | 0 | 0 |
| Ward | 12 | 6,314 | 1 | 0 |
| Winkler | 8 | 2,317 | 0 | 1 |
| Total April | 66 | 24,297 | 19 | 1 |
| Total March | 70 | 49,403 | 13 | 1 |
| Difference | 4 | 25,110 | 6 | 0 |

**Summary of Rigs and Wells Drilling**

| County— | Rigs | S.D. | Drlg. | Ttl. |
|---|---|---|---|---|
| Andrews | 3 | 1 | 3 | 7 |
| Brewster | 0 | 3 | 2 | 5 |
| Cochran | 1 | 1 | 0 | 2 |
| Coke | 0 | 1 | 0 | 1 |
| Crane | 1 | 1 | 5 | 7 |
| Crockett | 1 | 1 | 1 | 3 |
| Culberson | 0 | 4 | 0 | 4 |
| Dawson | 0 | 1 | 0 | 1 |
| Ector | 3 | 2 | 19 | 24 |
| El Paso | 0 | 2 | 0 | 2 |
| Fisher | 3 | 1 | 5 | 9 |
| Glasscock | 3 | 1 | 1 | 5 |
| Garza | 0 | 1 | 0 | 1 |
| Howard | 4 | 3 | 11 | 18 |
| Jeff Davis | 0 | 0 | 1 | 1 |
| Jones | 0 | 3 | 6 | 9 |
| Loving | 1 | 1 | 1 | 3 |

*A. G. (Bill) Evans-Lombe, district manager for the O. C. S. Co., Fort Worth, Texas and D. V. Carter, head of the petroleum engineering department of the Magnolia Petroleum Co., Dallas, Texas*

# The STANDBY of operating men!

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| | | | | |
|---|---|---|---|---|
| Lynn | 0 | 1 | 0 | 1 |
| Martin | 0 | 1 | 0 | 1 |
| McCulloch | 1 | 2 | 0 | 3 |
| Mitchell | 0 | 1 | 0 | 1 |
| Pecos | 5 | 4 | 2 | 11 |
| Presidio | 0 | 1 | 0 | 1 |
| Reagan | 3 | 1 | 0 | 4 |
| Reeves | 1 | 1 | 1 | 3 |
| Runnels | 1 | 3 | 0 | 4 |
| Schleicher | 0 | 2 | 0 | 2 |
| Scurry | 0 | 1 | 1 | 2 |
| Stonewall | 1 | 0 | 1 | 2 |
| Sutton | 1 | 1 | 0 | 2 |
| Taylor | 1 | 1 | 0 | 2 |
| Terrell | 0 | 1 | 0 | 1 |
| Tom Green | 0 | 0 | 1 | 1 |
| Upton | 5 | 3 | 13 | 21 |
| Ward | 15 | 11 | 24 | 50 |
| Winkler | 8 | 4 | 7 | 19 |
| Yoakum | 0 | 0 | 1 | 1 |
| Total April | 62 | 66 | 105 | 233 |
| Total March | 45 | 76 | 124 | 245 |
| Difference | 17 | 10 | 19 | 12 |

## Texas Panhandle

**Summary of Wells Completed**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Carson | 4 | 648 | 0 | 2 |
| Cottle | 1 | 0 | 1 | 0 |
| Gray | 22 | 8 623 | 2 | 2 |
| Hutchinson | 5 | 1,509 | 0 | 0 |
| Moore | 2 | 125 | 0 | 1 |
| Wheeler | 23 | 18,431 | 2 | 2 |
| Total April | 57 | 29,336 | 5 | 7 |
| Total March | 62 | 32,885 | 4 | 9 |
| Difference | 5 | 3,549 | 1 | 2 |

**Summary of Rigs and Wells Drilling**

| County— | Rgs. | S.D. | Dlg. | Ttl. |
|---|---|---|---|---|
| Carson | 2 | 2 | 9 | 13 |
| Childress | 1 | 0 | 2 | 3 |
| Collingsworth | 1 | 0 | 0 | 1 |
| Dallam | 0 | 1 | 0 | 1 |
| Gray | 19 | 7 | 52 | 78 |
| Hutchinson | 8 | 8 | 24 | 40 |
| Moore | 2 | 5 | 1 | 8 |
| Ochiltree | 1 | 0 | 0 | 1 |
| Randall | 0 | 1 | 0 | 1 |
| Roberts | 0 | 1 | 1 | 2 |
| Wheeler | 9 | 10 | 27 | 46 |
| Total April | 43 | 35 | 116 | 194 |
| Total March | 54 | 32 | 93 | 180 |
| Difference | 11 | 2 | 23 | 14 |

## Gulf Coast Fields

**TEXAS**

**Summary of Field Operations**

| Field— | Comp. | Prod. | Abd. | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Anahuac | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| Arriola | 1 | 310 | 0 | 0 | 0 | 2 | 2 |
| Barbers Hill | 3 | 1,271 | 0 | 0 | 2 | 11 | 13 |
| Batson | 1 | 0 | 1 | 0 | 1 | 4 | 5 |
| Big Hill | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Blue Ridge | 2 | 340 | 0 | 0 | 0 | 0 | 0 |
| Boling | 4 | 248 | 2 | 0 | 1 | 0 | 1 |
| Clay Creek | 2 | 340 | 0 | 0 | 0 | 1 | 1 |
| Cleveland | 1 | 240 | 0 | 0 | 0 | 1 | 1 |
| Coletto Creek | 2 | 236 | 0 | 0 | 0 | 2 | 2 |
| Conroe | 6 | 2,852 | 0 | 0 | 2 | 5 | 7 |
| Damon Mound | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Danbury | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Dickinson | 2 | 744 | 1 | 0 | 2 | 3 | 5 |
| Esperson | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Fannett | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Greta | 3 | 3,900 | 0 | 0 | 0 | 2 | 2 |
| Hankamer | 3 | 1,056 | 0 | 0 | 2 | 2 | 4 |
| Hastings | 2 | 1,008 | 0 | 0 | 1 | 4 | 5 |
| High Island | 3 | 950 | 0 | 0 | 3 | 5 | 8 |
| Hull | 2 | 600 | 1 | 0 | 1 | 1 | 2 |
| Humble | 1 | 54 | 0 | 0 | 0 | 3 | 3 |
| Kittrell | 5 | 616 | 1 | 0 | 0 | 0 | 0 |
| Livingston | 4 | 1,165 | 0 | 0 | 2 | 3 | 5 |
| Louise | 2 | 510 | 0 | 0 | 0 | 0 | 0 |
| McFaddin | 1 | 0 | 0 | 1 | 1 | 1 | 2 |
| Manvel | 9 | 2,136 | 0 | 0 | 1 | 9 | 10 |
| Moss Bluff | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Mykawa | 3 | 1,974 | 0 | 0 | 0 | 2 | 2 |
| Orchard | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Pierce Junction | 1 | 177 | 0 | 0 | 0 | 2 | 2 |
| Placedo | 1 | 284 | 0 | 0 | 3 | 2 | 5 |
| Pledger | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Port Neches | 1 | 0 | 1 | 0 | 0 | 2 | 2 |
| Port Lavaca | 1 | 574 | 0 | 0 | 0 | 5 | 5 |
| Raccoon Bend | 3 | 2,136 | 0 | 0 | 2 | 3 | 5 |
| Refugio | 5 | 2,076 | 0 | 0 | 0 | 5 | 5 |
| Sour Lake | 2 | 75 | 1 | 0 | 0 | 1 | 1 |
| Straton Ridge | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Thompson | 3 | 1,580 | 0 | 0 | 0 | 3 | 3 |
| Tomball | 11 | 4,633 | 0 | 2 | 0 | 6 | 6 |
| Tomoconnor | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Miscellaneous | 16 | 0 | 16 | 0 | 18 | 29 | 47 |
| Total Apr. | 110 | 33,085 | 28 | 3 | 47 | 131 | 178 |
| Total Mar. | 70 | 28,365 | 25 | 3 | 34 | 118 | 152 |
| Difference | 40 | 4,720 | 3 | 0 | 13 | 13 | 26 |

**LOUISIANA**

**Summary of Wells Completed**

| | Comp. | Prod. | Dry | Gas | Rgs. | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Bay Junop | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Bay St. Elaine | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Black Bayou | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| Bosco | 8 | 3,700 | 2 | 0 | 1 | 10 | 11 |
| Caillion Isld. | 2 | 2,085 | 1 | 0 | 1 | 1 | 2 |
| Calcasieu Lk. | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Cameron Meadows | 1 | 125 | 0 | 0 | 1 | 2 | 3 |
| Choctaw | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Darrow | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Dog Lake | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Edgerly | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Four Isle | 1 | 2,408 | 0 | 0 | 0 | 0 | 0 |
| Gillis | 6 | 1,487 | 3 | 0 | 1 | 5 | 6 |
| Gueydan | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Hackberry | 2 | 639 | 1 | 0 | 2 | 1 | 3 |
| Iowa | 1 | 352 | 0 | 0 | 0 | 2 | 2 |
| Jennings | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Lake Barre | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Lake Hermitage | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Lake Washington | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Lake Pelto | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Leesville | 2 | 2,042 | 0 | 0 | 2 | 3 | 5 |
| New Iberia | 1 | 0 | 1 | 0 | 0 | 3 | 3 |
| Port Barre | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| Roanoke | 0 | 0 | 0 | 0 | 2 | 4 | 6 |
| Starks | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| Sulphur | 1 | 500 | 0 | 0 | 0 | 5 | 5 |
| Sweet Lake | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Vinton | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| White Castle | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Miscellaneous | 7 | 0 | 7 | 0 | 12 | 16 | 28 |
| Ttl. Apr. | 37 | 13,338 | 18 | 2 | 24 | 74 | 98 |
| Ttl. Mar. | 29 | 15,133 | 7 | 1 | 14 | 72 | 86 |
| Difference | 8 | 1,795 | 11 | 1 | 10 | 2 | 12 |

## Louisiana Fields

**NORTH LOUISIANA**

**Summary of Field Operations**

| | Comp. | Prod. | Dry | Gas* | Rigs | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Avoyelles | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Bienville | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Bossier | 1 | 0 | 0 | 1 | 1 | 7 | 8 |
| Caddo | 13 | 354 | 3 | 4 | 4 | 20 | 24 |
| Catahoula | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Claiborne | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| De Soto | 3 | 0 | 1 | 2 | 2 | 8 | 10 |
| East Carroll | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Grant | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| La Salle | 1 | 30 | 0 | 0 | 0 | 0 | 0 |
| Madison | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Morehouse | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| Natchitoches | 1 | 0 | 1 | 0 | 2 | 2 | 4 |
| Ouachita | 1 | 0 | 0 | 1 | 1 | 1 | 2 |
| Rapides | 1 | 0 | 1 | 0 | 1 | 1 | 2 |
| Red River | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Sabine | 3 | 24 | 1 | 0 | 4 | 11 | 15 |
| Union | 2 | 0 | 0 | 2 | 1 | 1 | 2 |
| Webster | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Total April | 29 | 408 | 9 | 11 | 20 | 62 | 82 |
| Total March | 23 | 475 | 12 | 3 | 21 | 66 | 87 |
| Difference | 6 | 67 | 3 | 8 | 1 | 4 | 5 |

*Gas production: Bossier, 31,700,000; Caddo, 132,200,000; De Soto, 5,500,000; Morehouse, 1,500,000; Ouachita, 1,500,000; Union, 16,500,000; total, 188,900,000 ft.

## East Texas Border Counties

**Summary of Field Operations**

| | Comp. | Prod. | Dry | Gas | Rigs | Drlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Harrison | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Marion | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Panola | 0 | 0 | 0 | 0 | 3 | 6 | 9 |
| Shelby | 1 | 0 | 1 | 0 | 0 | 3 | 3 |
| Total April | 1 | 0 | 1 | 0 | 3 | 13 | 16 |
| Total March | 0 | 0 | 0 | 0 | 4 | 14 | 18 |
| Difference | 1 | 0 | 1 | 0 | 1 | 1 | 2 |

## Arkansas Fields

**Summary of Field Operations**

| | Comp. | Prod. | Dry | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Arkansas | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Ashley | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Calhoun | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Columbia | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Grant | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Hempstead | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Lafayette | 1 | 0 | 1 | 0 | 3 | 2 | 5 |
| Little River | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Lonoke | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Miller | 2 | 25 | 1 | 0 | 4 | 7 | 11 |
| Nevada | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Ouachita | 2 | 0 | 2 | 0 | 0 | 4 | 4 |
| Poinsett | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| St. Francis | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Sevier | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Union | 3 | 152 | 2 | 0 | 3 | 18 | 21 |
| Woodruff | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Total Apr. | 9 | 177 | 7 | 0 | 13 | 44 | 57 |
| Total Mar. | 7 | 1,152 | 3 | 1 | 11 | 47 | 58 |
| Difference | 2 | 975 | 4 | 1 | 2 | 3 | 1 |

## Alabama Fields

**Summary of Field Operations**

| | Comp. | Prod. | Dry | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Covington | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Hosston | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Lamar | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Pike | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total Apr. | 0 | 0 | 0 | 0 | 1 | 3 | 4 |
| Total Mar. | 1 | 0 | 1 | 0 | 1 | 3 | 4 |
| Difference | 1 | 0 | 1 | 0 | 0 | 0 | 0 |

## Florida

**Summary of Field Operations**

| | Comp. | Prod. | Dry | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Walton | 0 | 0 | 0 | 0 | 1 | 0 | 1 |

## Mississippi Fields

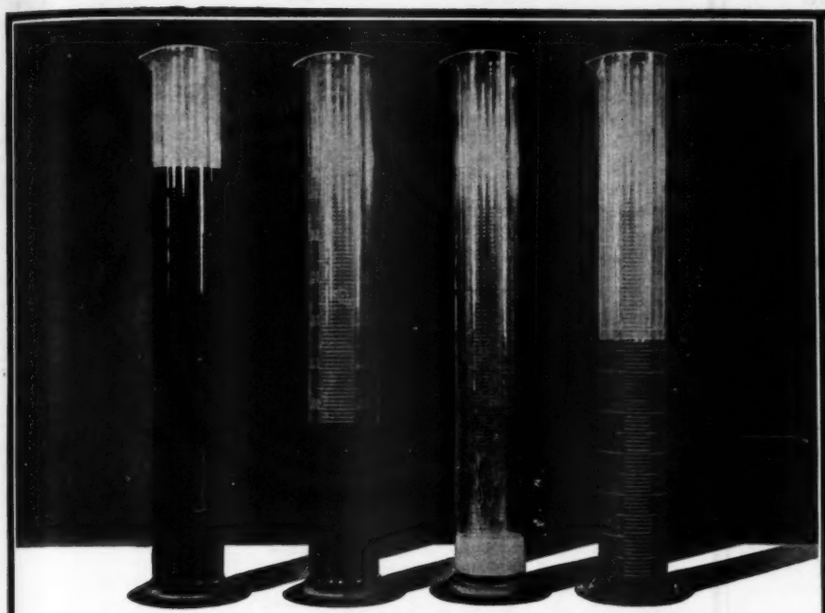
**Summary of Field Operations**

| | Comp. | Prod. | Dry | *Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Amite | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Boliver | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Clarke | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Harrison | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Hinds | 1 | 0 | 0 | 1 | 2 | 0 | 2 |
| Jones | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Lauderdale | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Monroe | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Rankin | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Simpson | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Warren | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Washington | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Winston | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Total Apr. | 1 | 0 | 0 | 1 | 4 | 13 | 17 |
| Total Mar. | 1 | 0 | 1 | 0 | 3 | 13 | 16 |
| Difference | 0 | 0 | 1 | 1 | 1 | 0 | 1 |

*Gas production: Hinds, 35,000,000 ft.

# New GULFLUBE MOTOR OIL

## *Refined by Gulf's Multi-Sol Process*



Above is a sample of the original charge of lubricating stock as it goes to the Multi-Sol plant.

Here is the quantity of carbon and sludge forming impurities removed by the Multi-Sol process.

The third test tube contains the solid paraffin wax removed by this efficient refining process.

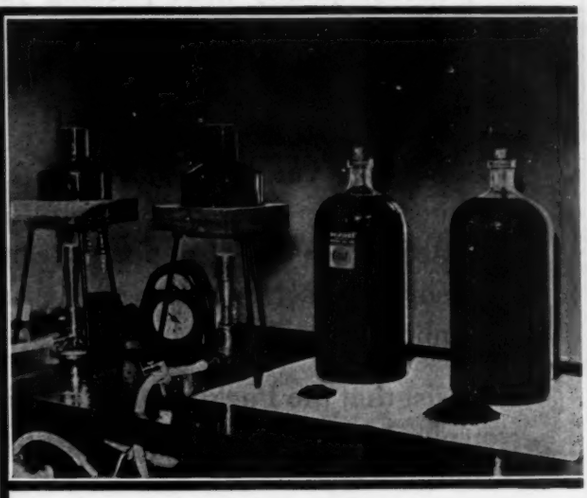
Above is shown the quantity of the pure Gulflube Motor Oil after dewaxing, filtering, etc., secured from the original lubricating stock fractionated from the crude.

Above is a general view of Gulf's new Multi-Sol plant at the Girard Point Refinery, Philadelphia, Pa.

### 6 REASONS WHY

NO OTHER MOTOR OIL OF ITS PRICE GIVES YOU *ALL* THESE QUALITY POINTS

1. HIGHER MILEAGE—high resistance to oxidation—non-sludging—extra long life.
2. LOW CARBON RESIDUE shows premium quality for paraffinic base oil.
3. EASY STARTING and resistance to heat due to high true viscosity index.
4. ZERO POUR TEST—wax actually removed—no wax crystal poisons added.
5. HIGH FILM STRENGTH—a pure natural mineral oil—no injurious compounds added—will not corrode new alloy bearings.
6. ECONOMICAL LUBRICATION due to these quality points.



The photograph above shows the quantity of carbon that is removed by the Conradson carbon residue test when applied to a gallon of the new Gulflube Motor Oil and a gallon of another widely distributed brand of motor oil.

### FLEET OPERATORS CAN NOW USE A PREMIUM QUALITY OIL WITHOUT PAYING PREMIUM PRICE.....

*[The new Gulflube is the only motor oil made by this process and sold at 25c per quart at service stations.]*

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The Multi-Sol process makes Gulflube *a premium oil in every respect.* In this process, solvents of two opposite actions are used. One action dissolves out the impurities in the lubricating stock refined from the crude oil—tars, gum and carbon forming compounds—and settles them to the bottom of the extraction tanks. The other action selects the desirable parts of the oil and floats them to the top. This selected oil is then "skimmed off," thoroughly dewaxed and filtered—to form the finest motor oil ever offered at its price.

Try this extraordinary new oil in your equipment. You will be pleased with the results.

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Title .....
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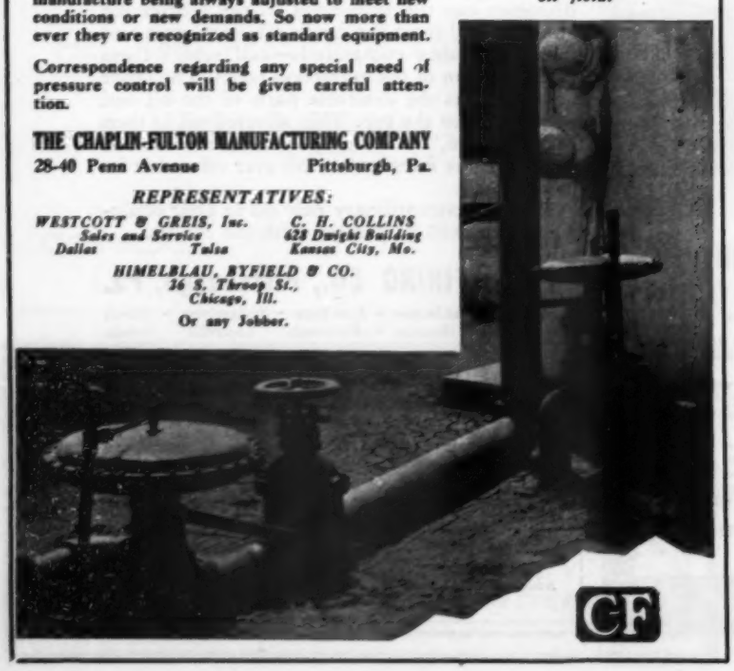
Or any Jobber.

*The regulators here seen are in operation in a flowing plant of an active Oklahoma oil field.*





## Rocky Mountain Area

### NEW MEXICO

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Chaves | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| Eddy | 0 | 0 | 0 | 0 | 2 | 12 | 15 |
| Lea | 21 | 60,305 | 2 | 0 | 16 | 36 | 52 |
| McKinley | 0 | 0 | 0 | 0 | 2 | 3 | 5 |
| San Juan | 1 | 70 | 0 | 0 | 2 | 13 | 15 |
| San Miguel | 0 | 0 | 0 | 0 | 0 | 7 | 7 |
| Santa Fe | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Valencia | 0 | 0 | 0 | 0 | 1 | 3 | 4 |
| Miscellaneous. | 0 | 0 | 0 | 0 | 2 | 8 | 10 |
| Total April. | 22 | 60,375 | 2 | 0 | 27 | 87 | 114 |
| Total March | 32 | 34,171 | 7 | 1 | 14 | 87 | 101 |
| Difference . | 10 | 26,204 | 5 | 1 | 13 | 0 | 13 |

### COLORADO

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Archuleta | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Grand | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Huerfano | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Jackson | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Larimer | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Moffat | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| Miscellaneous. | 0 | 0 | 0 | 0 | 1 | 16 | 17 |
| Total April. | 0 | 0 | 0 | 0 | 2 | 29 | 31 |
| Total March | 1 | 1,440 | 0 | 0 | 2 | 29 | 31 |
| Difference . | 1 | 1,440 | 0 | 0 | 0 | 0 | 0 |

### WYOMING

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Big Horn | 0 | 0 | 0 | 0 | 4 | 7 | 11 |
| Carbon | 1 | 0 | 1 | 0 | 1 | 7 | 8 |
| Converse | 1 | 0 | 0 | 1 | 0 | 6 | 6 |
| Crook | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| Fremont | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Lincoln | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Niobrara | 1 | 5,000 | 0 | 0 | 2 | 5 | 7 |
| Park | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Sweetwater | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Sublet | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Uinta | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| Weston | 2 | 25 | 1 | 0 | 3 | 5 | 8 |
| Miscellaneous. | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| Total April. | 5 | 5,025 | 2 | 1 | 10 | 65 | 75 |
| Total March | 5 | 460 | 1 | 1 | 7 | 66 | 73 |
| Difference . | 0 | 4,565 | 1 | 0 | 3 | 1 | 2 |

### MONTANA

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Big Horn | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| Carbon | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| Cascade | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Fergus | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Glacier | 4 | 565 | 0 | 0 | 10 | 16 | 26 |
| Liberty | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Phillips | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Pondera | 1 | 20 | 0 | 0 | 1 | 1 | 2 |
| Toole | 3 | 25 | 2 | 0 | 4 | 12 | 16 |
| Miscellaneous. | 0 | 0 | 0 | 0 | 1 | 5 | 6 |
| Total April. | 9 | 610 | 2 | 1 | 17 | 48 | 65 |
| Total March | 5 | 463 | 0 | 0 | 11 | 45 | 56 |
| Difference . | 4 | 147 | 2 | 1 | 6 | 3 | 9 |

### UTAH

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Total April. | 0 | 0 | 0 | 0 | 1 | 13 | 14 |
| Total March | 0 | 0 | 0 | 0 | 1 | 13 | 14 |
| Difference . | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## Central Ohio Fields

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Ashland | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| Medina | 10 | 15 | 3 | 5 | 3 | 8 | 11 |
| Holmes | 3 | 0 | 1 | 2 | 4 | 2 | 6 |
| Cuyahoga | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Lorain | 1 | 0 | 0 | 1 | 0 | 5 | 5 |
| Richland | 1 | 0 | 1 | 0 | 0 | 2 | 2 |
| Wayne | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Summitt | 1 | 0 | 0 | 1 | 1 | 5 | 6 |
| Fairfield | 3 | 0 | 0 | 3 | 2 | 0 | 2 |
| Knox | 3 | 0 | 2 | 1 | 3 | 6 | 9 |
| Coshocton | 1 | 0 | 0 | 1 | 0 | 4 | 4 |
| Licking | 1 | 4 | 0 | 0 | 1 | 5 | 6 |
| Muskingum | 1 | 0 | 0 | 1 | 0 | 7 | 7 |
| Athens | 2 | 0 | 1 | 1 | 1 | 5 | 14 |
| Belmont | 2 | 5 | 1 | 0 | 1 | 2 | 3 |
| Tuscarawas | 1 | 0 | 0 | 1 | 0 | 6 | 6 |
| Trumbull | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Crawford | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Stark | 5 | 0 | 0 | 5 | 2 | 14 | 16 |
| Guernsey | 8 | 27 | 2 | 3 | 4 | 10 | 14 |
| Gallia | 1 | 0 | 1 | 0 | 0 | 4 | 4 |
| Scioto | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Pike | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Carroll | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Lawrence | 0 | 0 | 0 | 0 | 1 | 3 | 4 |
| Meigs | 6 | 0 | 0 | 6 | 2 | 17 | 19 |
| Perry | 2 | 0 | 2 | 0 | 3 | 6 | 9 |
| Delaware | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Total Apr. | 54 | 51 | 15 | 32 | 38 | 122 | 160 |
| Total Mar. | 20 | 63 | 9 | 8 | 35 | 116 | 151 |
| Difference | 34 | 12 | 6 | 24 | 3 | 6 | 9 |

## Lima Fields

**Summary of Field Operations**

| Field— | Comp. | Prod. | Dry | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Wood | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Henry | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Lucas | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Allen | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Auglaize | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| Hardin | 1 | 0 | 0 | 1 | 1 | 1 | 2 |
| Van Wert | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Darke | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Shelby | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Sandusky | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| Seneca | 1 | 0 | 0 | 1 | 1 | 3 | 4 |
| Marion | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Wyandot | 3 | 0 | 2 | 1 | 4 | 3 | 7 |
| Total Apr. | 6 | 0 | 3 | 3 | 7 | 31 | 38 |
| Total Mar. | 7 | 30 | 2 | 2 | 4 | 34 | 38 |
| Difference | 1 | 33 | 1 | 1 | 3 | 3 | 0 |

## Michigan Fields

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Midland | 5 | 600 | 1 | 0 | 16 | 25 | 51 |
| Isabella | 9 | 130 | 1 | 6 | 23 | 29 | 52 |
| Oceana | 0 | 0 | 0 | 0 | 7 | 9 | 16 |
| Gratiot | 1 | 8 | 1 | 0 | 9 | 1 | 10 |
| Huron | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| St. Clair | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Oceolo | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Kent | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| Emmett | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| Cass | 0 | 0 | 0 | 0 | 6 | 1 | 7 |
| Sanilac | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| Newyago | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Saginaw | 0 | 0 | 0 | 0 | 3 | 2 | 5 |
| Livingston | 1 | 0 | 0 | 1 | 0 | 3 | 3 |
| Shiawasee | 0 | 0 | 0 | 0 | 1 | 4 | 5 |
| Ogemaw | 1 | 400 | 0 | 0 | 27 | 13 | 40 |
| Gladwin | 1 | 0 | 1 | 0 | 0 | 4 | 4 |
| Eaton | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Hillsdale | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Lenawee | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| LaPeer | 0 | 0 | 0 | 0 | 3 | 2 | 5 |
| Bay | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Roscommon | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Mason | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Chippewa | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Clinton | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Arenac | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Mecosta | 2 | 0 | 0 | 2 | 9 | 8 | 17 |
| Montcalm | 3 | 5,000 | 1 | 1 | 5 | 11 | 16 |
| Muskegon | 1 | 0 | 0 | 1 | 6 | 7 | 13 |
| Total Apr. | 25 | 6,130 | 6 | 11 | 130 | 140 | 270 |
| Total Mar. | 18 | 550 | 6 | 5 | 118 | 135 | 253 |
| Difference | 7 | 5,580 | 0 | 6 | 12 | 5 | 17 |

## Indiana Fields

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Gibson | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| Pike | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Knox | 5 | 20 | 1 | 3 | 0 | 2 | 2 |
| Daviess | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| Wabash | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Decatur | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Washington | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Dubois | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Madison | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Adams | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Cass | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| DeKalb | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Jay | 1 | 0 | 0 | 1 | 0 | 2 | 2 |
| Martin | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Perry | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Posey | 2 | 40 | 1 | 0 | 0 | 0 | 0 |
| Spencer | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Fountain | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Harrison | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Newton | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Sullivan | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| Vigo | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Vandeburg | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Total Apr. | 14 | 60 | 4 | 8 | 0 | 36 | 36 |
| Total Mar. | 15 | 85 | 2 | 9 | 0 | 37 | 37 |
| Difference | 1 | 25 | 2 | 1 | 0 | 1 | 1 |

## Illinois Fields

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Clark | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Crawford | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Jasper | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Total Apr. | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| Total Mar. | 2 | 70 | 1 | 0 | 0 | 9 | 9 |
| Difference | 2 | 70 | 1 | 0 | 0 | 1 | 1 |

## Kentucky Fields

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gas | Rigs | Drg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Ohio | 16 | 415 | 1 | 1 | 0 | 8 | 8 |
| Hancock | 4 | 125 | 1 | 1 | 0 | 5 | 5 |
| Daviess | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Total Apr. | 21 | 540 | 3 | 2 | 0 | 13 | 13 |
| Total Mar. | 9 | 538 | 0 | 1 | 6 | 11 | 17 |
| Difference | 12 | 2 | 3 | 1 | 6 | 2 | 4 |

## Eastern Fields

### PENNSYLVANIA GRADE FIELD

**Summary of Wells Completed**

| Field— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Bradford | 138 | 114 | 0 | 0 |
| Allegany | 3 | 3 | 0 | 0 |
| Venango-Clarion | 9 | 15 | 0 | 0 |
| Butler-Armstrong | 4 | 10 | 0 | 0 |
| Southwest Pennsylvania. | 4 | 0 | 1 | 3 |
| Southeast Ohio | 25 | 38 | 9 | 8 |
| West Virginia | 28 | 23 | 6 | 16 |
| Total April | 211 | 203 | 16 | 27 |
| Total March | 191 | 448 | 13 | 29 |
| Difference | 20 | 245 | 3 | 2 |

**Rigs and Wells Drilling**

| Field— | Rigs | Dig. | Ttl. |
|---|---|---|---|
| Bradford | 12 | 91 | 103 |
| Allegany | 2 | 0 | 2 |
| Venango-Clarion | 2 | 13 | 15 |
| Butler-Armstrong | 3 | 4 | 7 |
| Southwest Pennsylvania | 5 | 18 | 23 |
| Southeast Ohio | 20 | 38 | 58 |
| West Virginia | 24 | 75 | 99 |
| Total April | 68 | 239 | 307 |
| Total March | 74 | 187 | 261 |
| Difference | 6 | 52 | 46 |

# FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depths of sands, types of sands and operations on adjoining or nearby proptries. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

## Putting U in Line Between Tanks Should Meet This Problem

I have a small lease composed of seven stripper wells that each produce by pumping about 1 bbl. of oil and 25 to 30 bbls. of salt water daily. There is some natural gas accompanying the oil and I desire to utilize as much of this gas as possible as fuel for a gas engine used to drive the central power that pumps these wells. The fluid and gas from the wells are now conducted to the high "gun-barrel" wooden receiving tank from which the gas is now being taken. The water is siphoned from the bottom of this tank and the oil runs to two 100-bbl. lease storage tanks, one of which is of bolted steel construction and the other a tight deck wooden tank. Is there any way in which I can secure any gas that may be accumulating in these 100-bbl. stock tanks and add it to the gas now being taken off of the "gun-barrel"?—J. S. L.

It is necessary to assume certain things, but your brief description indicates you have a problem common to many small properties.

You do not say so, but it is assumed that the line that runs from the high "gun-barrel" to the 100-bbl. stock tanks is flanged into the side of the receiving tank, that the oil is permitted to run out as accumulated above the water and that this oil level is determined by the rate of discharge from the salt-water siphon.

Under such conditions unless some form of seal is interposed in the pipe line between the gun-barrel tank and the lease tanks, any gas accompanying the oil and water into the tank can escape as easily through the pipe conducting the oil to the lease tanks as it can escape through the connections you have provided for it to discharge into the engine feed lines.

Gas that has accumulated in the upper portion of the receiving tank will follow the path of least resistance in escaping. As it is quite certain the line that runs from receiving tank to lease tanks is at no time entirely full of oil, this line will prove an easy means of escape through the portion above the oil in the bottom of the pipe. As the oil runs out of this pipe and into the lease tanks an actual suction is created and this is probably more effective in drawing the gas from the receiving tank than the suction of the gas engine which is set at some distance from the tank battery.

Instead of attempting to gather the gas that has escaped to the lease tanks, which probably are not gas tight, it is a better plan to prevent the gas from escaping to the lease storage tanks. If this is done the gas will follow the natural path of escape provided for it to the gas engine.

To prevent gas from escaping with the oil it is recommended that some form of liquid seal be provided in the pipe line from receiving tank to lease tanks. This seal may be made in several ways, but the simplest, after the tank is erected, is made by building into the line a U shaped seal.

Draw down the fluid level in the receiving tank so that no oil will escape and then detach the pipe from the flange. Screw a 12-inch nipple into the flange. On this nipple screw an ell. Into the ell screw a short section of pipe, and turn it down so that it will become one leg of the U when all connections are assembled. Next screw an elbow on the bottom of this first leg of the U that has just been put in place, and then screw into the other side of this ell another 12-inch nipple that will run horizontally. Follow with a third ell and another section of pipe of the same length as the piece used to make the first leg of the U and this will complete the formation of the liquid seal. The pipe is connected to the ell that is screwed to the top of the second leg of the U and laid to the lease tanks and connected just as they were formerly arranged.

With this U interposed in the flow line, oil will accumulate in it and prevent any gas from running through this line to the lease storage tanks. This done, your purpose has been accomplished by prevention of gas escaping to the lease storage rather than by allowing it to flow into these tanks and then attempting to reclaim it.

The length of the legs of the U can be determined by the pressure at which the receiving tank is sealed. If this tank is tight it is possible to build up a few ounces of pressure within it. As the summer sun heats the tank the gas will expand and the pressure may increase slightly. But for practical purposes it is safe to assume that for each foot of length of the U the oil column within will exert a pressure of approximately .37 of a pound. Since there are 16 ounces to the pound, this oil column will exert a pressure of .37 × 16 or approximately 6 ounces.

If the pipe used to construct the legs of the U are 12 inches long the column of oil that will accumulate in the U will require about 6 ounces of pressure to cause it to flow. As a matter of fact, it will require more than this pressure to overcome friction and start the oil to moving, but for the purpose of this problem it may be assumed that your receiving tank will be sealed against flow of gas to the lease tanks at 6-ounce pressure and it will be much easier for the gas to take the opening leading to the gas engine than to attempt to flow with the oil to the lease tanks, and this will satisfy your requirements.

This U should be cleaned from time to time to remove any foreign matter.

## Study Geophysics, but Brush Up on Your Mathematics First

**Could you give me some detailed information on the geophysical methods of finding oil and gas? There is said to have been improvement over those methods. A concern in Cleveland, Ohio, claims to have superior developments. To your knowledge are there better and surer methods of locating oil and gas than the geophysical?—P. E. A. C.**

The subject of geophysical prospecting is too big to handle in detail on this page. It takes books to do that. If you are seriously interested in geophysics and not merely curious, this department can recommend several good books on the subject, but warns you in advance that you will have to brush up on your mathematics and physics in order to read them intelligently.

There is no method recognized by science of finding oil and gas without drilling into the formation. The discovery of a favorable structure is possible, but whether the formation within the structure contains oil and gas can only be determined with certainty by drilling. There are many factors that cannot be determined by long range prophecy, such as saturation, porosity and permeability of the reservoir rocks, all of which have a direct bearing upon the subject of making a commercial well out of a hole in the ground.

Geophysical prospecting is not confined to oil and gas exploration and is not limited to certain countries. Therefore, anyone entering this field is competing with the world of science.

The Cleveland concern you mention is not the only one that makes large claims concerning ability to find oil. There always will be such concerns so long as credulity and the get-rich-quick motives provide a field for their operation. Fame and fortune await the man who discovers a method of finding this underground treasure and not merely geological conditions favorable for its deposit. But he won't have to reap the fortune by distributing alluring literature. He'll get it by finding oil.

## Little Done So Far Toward Using Protective Coating for Rods

**In considering possible methods of cutting down the loss on sucker-rods resulting from corrosion I have wondered why it could not be done by treating them with some protective coating, just the same as is done in the case of pipe lines. Has this method ever been tried?—G. F. S.**

Experimenting has been done along the line of preserving sucker-rods with protective coatings, but the reported results have not been of a sort to prompt adoption of this method in the field. Attempts to protect rods in this manner were reviewed as follows by Blaine B. Wescott and L. W. Vollmer, of the Gulf Research & Development Corp., in a paper presented before the A.I.M.E. meeting in Tulsa last fall:

"Along with joint design and the study of materials for sucker-rods, there have been more or less continuous efforts to develop some type of coating to protect rods against the ravages of corrosion. Galvanizing and cadmium plating have been tried sporadically with only indifferent results in very corrosive areas. Of the group of metals which may be applied by plating or hot-dipping, lead appears to have the greatest potentialities. Its great ductility and natural resistance to corrosion suit it admirably for sucker-rod service. A major objection attends its use, however; if the rod is not perfectly coated accelerated corrosion due to galvanic action between the steel and lead is certain to cause rapid failure.

"Experimental strings of leadized rods were tried several years ago with excellent results after an initial weeding out of poorly coated rods. Their use never developed beyond the experimental stage, however, and at the present a source of such rods is no longer existent.

"Two other types of protective metal-coated rods known as composite rods were given limited experimental trials. One kind of joint was made of carbon steel clad with wrought iron. In another the box and pin forgings were copper-clad. The purpose of course was to obtain the combined benefits of high-strength steel and the corrosion resistance of the coatings. Forging difficulties and high cost are sufficient to offset any increased service provided by these materials.

"Recently attempts were made to provide protection to rods by means of paint, varnish and lacquer coatings. The value of such coatings except for protection during transportation or in storage has been definitely shown to be negligible and not worth the extra cost involved."

## Why Was It Called That?

### POTEAU

Poteau is the name of the county seat and of a river in Le Flore County, Okla., site of a natural gas field. It also is the name of a mountain near the headwaters of the stream. Poteau is the French word for post and is supposed to have been adopted as a name for the river because of a post or stake driven into the ground to mark a trading concession near its mouth. Another explanation is that it was derived from "poteau de guerre" (war post), designating a stake around which Indians held war dances, using it as a target for their tomahawks. Sometimes captives were fastened to the stake and tortured.

## Purchasers Advised to Increase Inventories

Purchasing agents of representative oil companies and buyers in other industries meeting at the twentieth annual convention of the National Association of Purchasing Agents were advised to build up a supply of six months' material by next fall and make heavy investments in plant and property improvements by Dr. Lewis R. Haney, professor of economics of New York University.

Doctor Haney in an address on "Business Conditions and Outlook" discussed monetary policies of the government since the start of the depression in their relation to business conditions and predicted that continued inflation was inevitable. He advised the purchase of materials and supplies as a profection against advancing prices and advocated the modernization of plants at this time as a protection in the deflationary period which will follow in which competition for survival among industrial units will be keener than ever.

Approximately 50 purchasing agents of the larger oil companies and manufacturers serving the oil industry were here to attend the sessions of the oil buyers' group and the general meetings of the convention at the Hotel Waldorf-Astoria with a total attendance of more than 1,200 from all industries. The general sessions were addressed by several speakers of national repute and the tone of these talks pointed to the expectation of a gradual expansion in business.

The meeting of the Oil Buyers Group which was devoted to the discussion of the question, "Would Simplification of Sizes and Weights of Tubular Products Reduce Cost and Prices?" was attended by approximately 40 representatives of oil companies and manufacturers of tubular goods. O. E. McClatchey, purchasing agent of the Barnsdall Refining Co., presided and the discussion was lead by Guy A. Thompson, director of purchases for the Empire Companies, and Frank D. Bryant, district purchasing agent of the Standard Oil Co. of California.

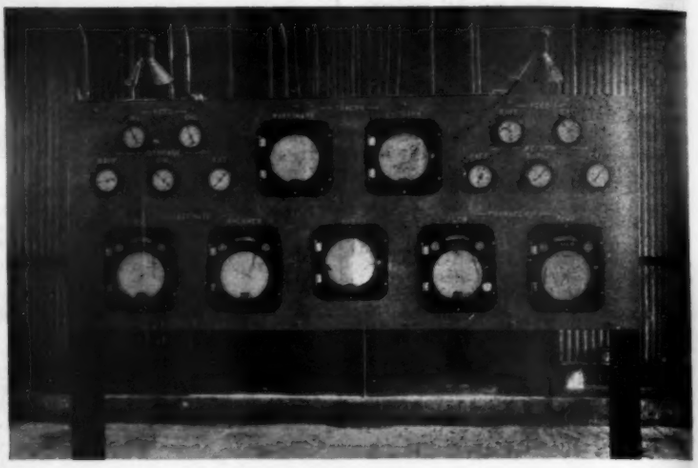
### ALBERTA OIL MOVEMENT

COUTTS, Alberta, June 1.—There has been a noticeable increase in the movement of crude and refined products from the refining plants here, both by tank car and motor truck. The C.P.R. has been running at least one extra freight daily to handle the traffic. The bulk of the crude goes to refineries in Calgary and Moose Jaw, while the refined products are distributed through Alberta and Saskatchewan and British Columbia.

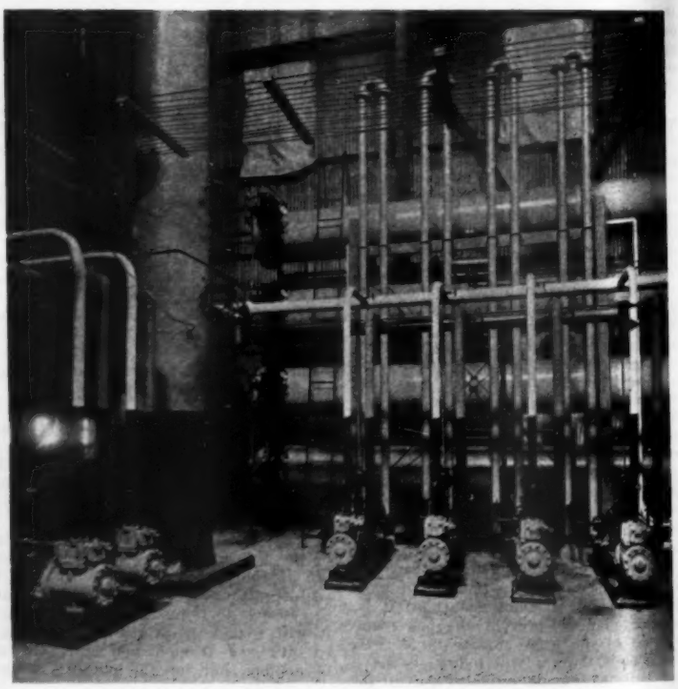
## Bradford-Penn Starts Chlorex Treating Unit

(Continued from Page 50)

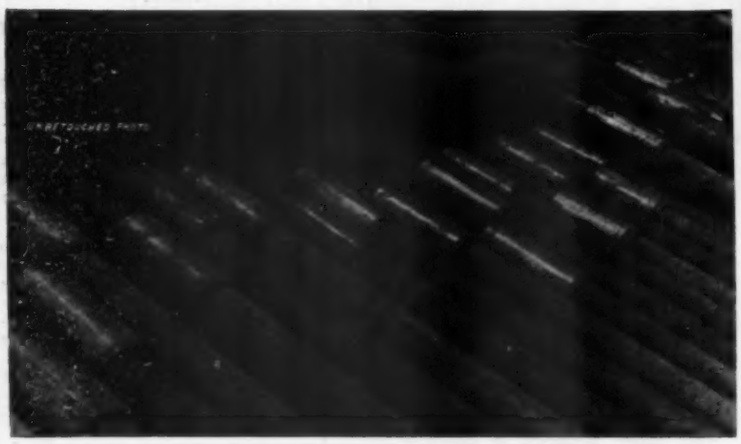
The question why refiners of premium grade crude oil should turn to solvent extraction to produce a "super-Pennsylvania" motor oil is answered in the trends of modern engine design. Yearly the service conditions to which motor oils are subjected are becoming more severe and more exacting. Solvent refining of Pennsylvania oils so enhances their well known qualities to give greatly improved service performance. In terms of interest to the motorist, it has been claimed, solvent refined Pennsylvania oils decrease oil consumption up to 50 per cent. The period between crankcase drainings may be doubled. One grade of solvent processed Pennsylvania oil is said to be equivalent to three S.A.E. degrees. This means that the solvent refined oils give easy starting characteristics of the lighter S.A.E. grade with the safe heat protection of the heavier grade. It can be seen that with such oils it is safe to use considerably lighter oil than would be used of the average grade on the market. The use of the lighter grade of solvent refined Pennsylvania oil, allows of gasoline savings of up to 15 per cent. All of these advantages can be obtained without any loss in the low wear and maintenance which high grade Pennsylvania oils have heretofore afforded, it is contended. Removal of the small quantities of impurities present in normal Pennsylvania oils greatly enhances their well known properties of resistance to sludging and carbonization.



*Instrument panel for plant control*



*In the rear are shown the mixing columns, settlers and interfacial controls. At the left is the raffinate recovery column.*

Drillers: BEWARE of Shiny Tool Joints

Here's a pile of Tool Joints on Drill Pipe that are the worse for wear. In the well they've ground against the casing, causing dual wear on casing and pipe. Shiny Tool Joints indicate unwarranted friction. Keep the Tool Joints away from friction. Install Patterson-Ballagh Pipe and Casing Protectors. They keep the Tool Joints "like new".

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Plant and General Offices
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Demand the original, genuine, all-rubber Protectors. Their genuineness is guaranteed by the name "PATTERSON-BALLAGH" embossed on each Protector.

*ALWAYS USED IN THE DEEPEST WELLS*

PATTERSON-BALLAGH PROTECTORS


### DETROIT GAS MARKET

DETROIT, Mich., June 1.—A preliminary survey indicates a large potential market for natural gas among Detroit industries, Frank P. Fisher, city rate engineer, announced recently. The survey, conducted by M. J. Dewey, of Columbus, Ohio, was authorized by the city council looking toward municipal ownership of gas distribution and bringing in of natural gas.

"When the first survey was made in 1930," Mr. Fisher said, "the potential market for 17 industries was listed at 47,000,000 feet a day. The present survey indicates this would be sufficient for only six or seven industries."

Judge Ira W. Jayne in circuit court is expected to set a trial date soon for hearing of the city's suit against higher rate schedules by the Detroit Gas Co. The suit was begun April 6. The gas company has filed petition for dismissal.

4-SOUND REASONS
for using T-I-W CHRISTIAN BITS

1: Has long shank to insure straight hole.

2: Affords pressure-on-bottom advantages of short bit.

3: Oval shaped body builds better side walls faster.

4: Design of body minimizes bailing up in sticky formations.

Every bit honestly and correctly dressed. Excellent field service. Your business solicited.

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SPECIFY.... McEvoy PACKER
Remarkable increase in sales proves preference . . . for this product . . .
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ALWAYS
RENEW YOUR
SUBSCRIPTION
PROMPTLY

MEMO

Bill You can lick that drilling-out trouble by using Baker Cement Float Shoes and Collars and Guide Shoes— They are made of Bakelite & Concrete only

G.S.

# Among Gulf Coast Drilling Contractors

L. W. Capps has taken a contract from H. M. Naylor to drill a test about 3½ miles east of Jennings, La., on a location just across the road from the Jennings Country Club. Word is out that the crews will be required to wear plus-fours and light jerseys on the morning tour, tuxedos and stiff shirts on the evening tour, and full dress with swallow tails on the graveyard tour. On a wildcat test for Dick Schwab, 12 miles southwest of Orange, Capps is drilling below 2,900 feet. Capps also is preparing to spud in a well for the Crown Central Petroleum Co. in the Placedo Field, Victoria County.

Rutherford Drilling Co. is drilling below 4,500 feet on No. 3 Cobb in the Van Vleck Field, Matagorda County, for the Skelly Oil Co. Same contractor is drilling below 2,500 feet on a well for the Eastern Texas Petroleum Co. in the Placedo Field. This test is a diagonal southeast offset to the discovery well. Rutherford is also waiting on a location for Brown and Wheeler in the Conroe Field, where he will dig a well on the west side of the field on 60 acres adjoining the Krohn lease.

Jeff Hooper is drilling below 200 feet on surface hole on a well near Cypress, Harris County, for H. B. Herbert and J. J. Still. Hooper is also rigging up in the Coleto Creek Field, Victoria County, to drill a 2,800-foot test for the Trans-State Oil Co. on the Robert Castner 52 acres.

Edwards Drilling Co. completed a dry hole for Hamill & Smith at 4,850 feet in the Mykawa Field, Harris County; completed a 7,000-foot test for Woodley Petroleum Co. and C. B. Bunte in St. Landry Parish, Louisiana; and completed a producer for the Mortex Co. in the Conroe Field. Edwards is moving a rig in to the Placedo Field to drill a well for interests to be announced next week.

Anderson, Kerr & DeArman are preparing to spud a test for Diadem Oil Co. on a 320-acre tract comprising the W. W. Urban estate, James Cooper Survey, Waller County. Test will be carried to the Cockfield.

C. & C. Drilling Co. is drilling below 3,000 feet on No. 3 Watt for the Gem Oil Co. in the Livingston Field, and has spudded on an 8,200-foot test for Coast Petroleum Co. in the Dickinson Field, Galveston County.

Glenn H. McCarthy, Inc., expects to be spudded in on its deep test in the new Anahuac Field, 1¾ miles north of the nearest Humble Oil & Refining Co. producer, by the end of this week.

Cron & Gracey have one rig moving to new location for the Texas Co. in the Manvel Field, Brazoria County; one rig running for the British-American Oil Co. in the East Texas Field; one rig running for the Repollo Oil Co. at Eunice, N. Mex.; one rig running at Port Lavaca for the Texas Co.; two rigs at Iowa, La.; two rigs at Roanoke, La., and one rig at White Castle, La., for the Shell Petroleum Corp.

George Echols completed a dry hole for the Felmont Oil Co. in Bee County at 6,335 feet; is drilling below 4,000 feet on the Mantor & Briggs well for the Sun Oil Co. in Starr County; has set surface pipe on a well for the Sun Oil Co. on the Brooks ranch in Jim Hogg County; is setting 7-inch pipe at 5,990 feet for the Humble Oil & Refining Co. on the Thompson ranch, Bee County; is moving in a rig to drill a 6,300-foot test for the Quintana Petroleum Co. on the Nash ranch in Brazoria County; is drilling below 4,800 feet for the Shell Petroleum Corp. at Tomball; is preparing to drill in a well for the Uscan Oil Co. in the Manvel Field; is planning to cement back, whipstock out, and recomplete a well in the Manvel Field for J. Simmons of Dallas, after failure of cement plug to hold back water in bottom of hole; and is preparing to move a rig into the East Texas Field to drill a well for the Houston Oil Co.

Anderson, Kerr & DeArman Drilling Co. has abandoned its well in the Blue Ridge Field at 4,196 feet.

Edwards Drilling Co. is waiting orders on a wildcat for Woodley Petroleum Co. and C. B. Bunte in St. Landry Parish, Louisiana, which has been carried to contract depth of 7,000 feet. Same contractors are setting the oil string in a well for the Mortex Corp. in the Conroe Field, and are drilling below 4,400 feet on a well for Hamill & Smith in the Mykawa Field, Harris County.

*In a comfortable corner of the T-I-W Booth at the recent Houston Oil Show, V. T. Jones, drilling foreman for the Gulf Production Co. in the Pierce Junction and Manvel fields (extreme right); Joe Simmons, independent operator of Houston (second from right); R. N. Vickers, Vickers Machine Co., Smackover, Arkansas; and L. B. Rowsey of Walter O'Bannon Co. were snapped by the photographer as they swapped yarns about the "good old days" of 10 and 15 years ago*

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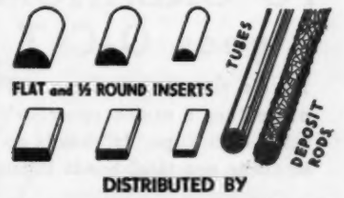


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# South Houston District Test Holds Attention; Best Completion Reported in Port Lavaca

By F. L. SINGLETON
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., June 3.—Interest on the Gulf Coast is centered on the South Houston district, where Stanolind Oil & Gas Co. is preparing to test its No. 1 fee, a wildcat test located in the H.T.&B. Survey No. 5. After being plugged back the second time from an original depth of 5,069 feet, due to a crooked hole, it was drilled to 5,000 feet in sand, at which time an electrical coring test was made of the hole. Nine and five-eighths inch casing is being run to be cemented at the bottom of the hole, and the operators will make the first test by perforating the casing at the bottom, and if production is not obtained, the upper sands that were indicated by the electrical coring device will then be tested through perforated casing.

At its present depth the well is bottomed in the Frio sand that was topped at 4,745 feet, and although the well has been a "mystery" test ever since drilling operations commenced, it is reported that approximately 187 feet of oil-bearing sands have been encountered.

That the above report was more or less correct was fairly well confirmed during the week, when the company selected this district for a camp site for its field employes and announced location for four tests located as follows: No. 1 F. J. Burkey in the center of Lot 15, Block 105, or 960 feet west and 3,570 feet north of No. 1 fee; No. 1 C. E. Gibson is in the center of Lot 9, Block 41, or 1,180 feet west and 1,090 feet north of No. 1 fee; No. 1 J. W. Horlow is 1,390 feet east and 660 feet south of No. 1 fee, in the center of Lot 10, Block 82; and No. 1 Ed Wells is 1,240 feet east and 2,270 feet north of No. 1 fee, in the center of Lot 3 in Block 146, all being in the H.T.&B. Survey No. 5.

The test is located on a block of 4,200 acres, originally blocked by Johnston and Johnston and transferred to the Stanolind Oil & Gas Co. after drilling operations had commenced. The majority of the acreage is divided into small town lots, and an agreement has been made with the landowners, whereby one well is to be drilled to 20 acres, which will curtail drilling in the district considerably provided the above test makes a producer.

### Port Lavaca

In the Port Lavaca Field, northern Calhoun County, Haliburton Oil Producing Co.'s No. 1 Dave Burton, and east offset to the discovery well, was completed for the best well in the field, when it was finished at a total depth of 6,263 feet for an initial production of 80 bbls. per hour, flowing through a one-fourth inch choke, with tubing pressure 600 pounds and casing pressure 1,400 pounds. Although its total depth is only a few feet deeper than the discovery well, it is reported to have encountered more sand than any other producer in the field. The first oil sand was cored at 6,228 feet, and casing was cemented at 6,240 feet.

Texas Co. announced location for another test when it staked No. 1 Ada Foster 1,250 feet west along the south line from the southeast corner of the lease, and 466 feet north at right angles in the A. Esparza Survey. The rig is being moved in and it should be spudded the first part of the week. One mile northwest of the discovery well the company is preparing to test its No. 1 R. Duelberg at 6,246 feet, after plugging back from a depth below 6,418 feet. About 5,000 feet southwest of the discovery well the company's No. 1 Charles Geryk in the Y. Benavides Survey is coring in sandy shale below 6,252 feet and should encounter the pay within a few hours. The southern part of the field was defined by the abandonment of the company's No. 1 Blardone at 7,402 feet after an electrical coring test was made of the hole. Location is in the Samuel Shupe Survey.

### Hastings Field

Humble Oil & Refining Co. entered into activities in the Hastings Field, northeastern Brazoria County, when it made location for three tests. Southwest of the discovery well its No. 1 J. F. Bridges is located in the center of the north 10 acres of a 20-acre lease in the A.C.H.&B. Survey No. 2. On the same lease and in the south 10 acres, material is being moved in for its No. 2 J. F. Bridges. Due east of Stanolind Oil & Gas Co.'s No. 1 Miller on the west side of the field, its No. 1 J. C. Johnson is located in the center of a 10-acre lease in the A.C.H.&B. Survey No. 2.

Two tests being drilled by Stanolind Oil & Gas Co. have reached the sand and should be completed the latter part of the week. The company's No. 1 Grote in the A.C.H.&B. Survey No. 2 topped sand showing oil at 5,569 feet and is coring ahead in oil sand below 5,905 feet. No. 2 Sneed, an east offset to the company's No. 1 Paul, a producer, encountered the first oil sand at 5,689 feet and is coring ahead in oil sand below 5,725 feet. The company's No. 1 M. Kidd is a new location and is being rigged up. It is 285 feet south of the north line, and 455 feet east of the west line of a 58.4-acre lease, and is a north offset to the company's No. 2 Surface in the A.C.H.&B. Survey No. 2.

The field is being looked upon as one of the largest fields to be discovered on the Gulf Coast. The five wells which have been completed have all been producers and they have shown the producing sand body of the field to be more than 100 feet thick.

Eleven miles east of the town of Damon, western Brazoria County, Quintana Petroleum Co. is moving in material for a test to be drilled on the Nash Dome and it is located on the G. L. Wood lease and is 2,778 feet from the west line and 5,555 feet from the south line of a 1,483-acre lease in the Thomas Spraggins Survey.

### Shepherd Mott Area

Much attention is being given H. M. Smith, Inc.'s No. 1 Wadsworth, a wildcat test located west of the Shepherd Mott area, Matagorda County, which is running casing preparatory to testing at a total depth of 8,418 feet. Considerable oil showed up in the slush pit at 8,418 feet and the operators decided to run casing for a test after an electrical coring test that was made of the hole indicated production possibilities from sand between 8,155-8,167 feet. Location is in the S. R. Fensler Survey. On the Shepherds Mott Dome, Helmerich and Payne have derrick for their No. 1 Hawkins, located 850 feet south, 70 degrees west of Cockburn Oil Co.'s No. 6 Hawkins, a dry hole located in the D. McCarty Survey.

### Anahuac

Approximately 1½ miles north and slightly west of the Anahuac Field, northern Chambers County, R. A. Mason and others are moving in material for an interesting semiwildcat test to be drilled on the R. M. White lease, located 3,125 feet north of the south line and 466 feet from the west line of the James McGahey Survey. The outcome of the test will be most interesting as it will reveal in what direction the producing trend of the Anahuac Field is to extend. Humble Oil & Refining Co.'s No. 2 Middleton, in the Anahuac Field, topped the sand showing oil at 7,062 feet and is running preparatory to testing. Total depth is 7,126 feet, and it is located in Section 64. H.&T.C. Survey.

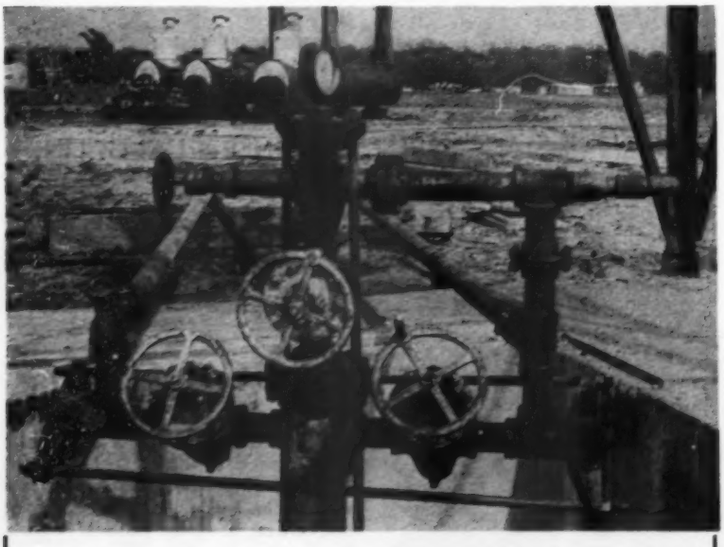
Northwest of the Anahuac Field, and due north of the town of Anahuac in Chambers County, South Gulf Oil Co.'s No. 1 J. T. White, located in the Luke Bryan Survey, is drilling in hard rock below 6,988 feet, after an attempted drill stem test from 6,805-68 feet failed, due to the seat failing to hold. Based on top of the Frio reported topped at 6,825 feet, it is checking several hundred feet higher than Turnbull and Irwin's No. 1 Sudindorf, a dry hole located approximately 7 miles southeast and about 200 feet higher than Humble Oil & Refining Co.'s No. 1 Middleton, the discovery well in the Anahuac Field, consequently it is being watched with much interest. Salt water sand was reported cored from 6,862-68 feet.

### Dickinson

In the Dickinson Field, Galveston County, Humble Oil & Refining Co. is running casing preparatory to testing its No. 1 Fugger, after a four-minute drill stem test from 8,055-8,081 feet, the total depth, tested 9 thribbles of drilling mud and 9 thribbles of oil and gas with drilling mud, through a one-fourth inch choke on top and a three-eighths inch choke on bottom of the testing tool. Location is 323 feet from the west line, and 522 feet from the north line of the lease in the J. S. Sherman Survey. Turnbull and Irwin's No. 1 Joe Piazza was being washed in, after a 12-minute drill stem test from 7,927-8,217 feet, tested 500 pounds of pressure in four minutes with a slight trace of distillate. It is bottomed in the Frio sand at 8,418 feet and the test was made through perforated casing, from 7,945-70 feet. The Discorbis was topped at 6,520 feet, Heterostegina 6,905 feet, Marginulina 7,245 feet, and the Frio at 7,990 feet.

### Waller County

In the northern part of Waller County, Diadem Oil Co. is clearing location for its No. 1 Urban Estate, a wildcat scheduled to be drilled to the Cockfield sand. The test is located on a block of approximately 4,000 acres which is owned by the Rice Institute. The test is being drilled on the Urban lease which was "farmed" out to the above company by



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Shell Petroleum Corp. for the drilling of the test. Several major companies hold considerable leases around the block, which has been checked with geophysical instruments several times.

### Montgomery County

Charles B. Gohlson's No. 1 Aaron Parker, a wildcat test in northern Montgomery County, was tested again during the week, and on a 32-minute drill stem test through a one-quarter inch choke on top and bottom from 3,724-3,769 feet, the total depth, the operators recovered two joints of drilling mud and eight joints of drilling mud, cut with oil and a small show of gas. Casing will be cemented this week and another test made. It is bottomed in the Cockfield sand topped at 3,695 feet. Location is in the J. Lindley Survey.

### Jasper County

Five miles northeast of Jasper, northeastern Jasper County, Marathon Oil Co. made location for its No. 1 Jasper County Lumber Co., a wildcat test located 330 feet out of the northeast corner of 176.5-acre tract in the T. C. Holmes Survey.

### Trinity County

Gulf Production Co. abandoned its No. 1 Trinity County Lumber Co. at 3,005 feet in shale. Location is in the J. M. Gomez Survey, Trinity County. The company made location for its No. 2 Trinity County Lumber Co., 1,287 feet east and 1,480 feet south of the southwest corner of the Stanley and Barrett 99.5-acre tract in the Trinity County School Land Survey.

### Colorado County

Due north of Columbus in the extreme northeastern part of Colorado County, Walter C. Keeble made location for his No. 1 Frank Weinkuhn, a wildcat test, located 150 feet east of the west line and 150 feet south of the north line of a 150-acre tract in the F. A. Zimmerschield Survey.

### COASTAL LOUISIANA

Two interesting Coastal Louisiana wildcat tests were marked off the list the past week. In St. Landry Parish, Woodley Petroleum Co.'s No. 1 Thistle Waite Lumber Co. was abandoned in shale at 7,001 feet after an electrical coring test showed nothing of importance. It is located on a block of 12,000 acres in Section 68-5s-4e. In St. Martin Parish the geophysical prospect of Texas Co.'s No. 1 State-Plumb Bob, located in Section 9-8s-7w, was abandoned in water sand at 8,204 feet.

In East Baton Rouge Parish, Superior Oil Producing Co.'s No. 1 Duplanter-Community, a wildcat test in Section 6s-7s-1e, encountered considerable trouble when the drill stem was stuck at 7,747 feet, and the operators are preparing to sidetrack at 1,830 feet.

A 1,500-foot southeast extension to the Bosco Field, Acadia and St. Landry Parishes, was marked up by the completion of Superior Oil Producing Co.'s No. 1 Martinez in Section 35-8s-3e, which was completed at a total depth of 8,606 feet for an initial production of 897 bbls. in 24 hours through a ten-sixty-fourths inch choke with tubing pressure 1,250 pounds and casing pressure 1,600 pounds. This is one of the best producers to be completed in the field and opens considerably more acreage for development. A 500-foot east extension was made by the completion of Superior Oil Producing Co.'s No. 8 Larcade in Section 35-8s-3e. Bottomed in oil sand at 8,705 feet, with 7-inch casing cemented at 8,684 feet, it made 651 bbls. in 20 hours through a ten-sixty-fourths inch choke, with tubing pressure 1,060 pounds and casing pressure 1,310 pounds. Two other producers were made in the field, but were within the proven limits of the field. They were No. 2 Falls completed for 755 bbls. and No. 9 Larcade which made 463 bbls. in 24 hours.

After a delay of several days due to high water, Texas Co. completed its No. 2 Nickerson in the Gillis Field, Calcasieu Parish, making the eleventh producer to be completed for the field. Bottomed in oil sand at 6,752 feet and with 7⅝-inch casing cemented at 6,735 feet, it was completed for an initial production of 500 bbls. per day through a one-quarter inch choke with tubing pressure 900 pounds. The company made locations for No. 5 Nickerson and No. 6 Nickerson, being located 2,826 feet north and 3,192 feet west of the SE cor. of Section 12, and 287 feet north and 289 feet west of the SE cor. of the NW ¼ of Section 12, respectively.

## Wildcat Operations on Gulf Coast

**Week Ending June 1**

**RACCOON BEND—AUSTIN COUNTY**

Humble O. & R. Co.'s No. 11 Meuller, 303 ft. SE from W cor., 200 ft. from S line of lease, Wm. C. White Sur.
Drlg. shale 4,125 ft.
Humble O. & R. Co.'s No. 8 Bellville, 190 ft. from N cor., 610 ft. E from No. 7.
Rig up.

**ALLEN DOME—BRAZORIA COUNTY**

Mills Bennett Prod. Co.'s No. 4 Rose Allen, 339 ft. SE of No. 1, 300 ft. E of No. 4 Owens, J. G. Mendal Sur.
Coring sand 4,687 ft.

**DAMON MOUND—BRAZORIA COUNTY**

Intercoastal Oil Co.'s No. 13 Wisdom, 150 ft. from NW line and 10 ft. from SW line of Lot "D", Blk. No. 51.
T.D. 2,600 ft.

**HASTINGS—BRAZORIA COUNTY**

Humble O. & R. Co.'s No. 1 J. F. Bridges, center of N 10 acres of 20-ac. lease, A. C.H.&B. Sur. No. 2.
Location.
Humble O. & R. Co.'s No. 2 J. F. Bridges, center of S 10 acres of 20-ac. lease, A. C.H.&B. Sur. No. 2.
Location.
Humble O. & R. Co.'s No. 1 J. C. Johnson, center of 10-ac. lease, A.C.H.&B. Sur. No. 2.
Location.
Stanolind O. & G. Co.'s No. 1 Kidd, 285 ft. S of N line, 455 ft. E of W line of 58.4-ac. lease, A.C.H.&B. Sur. No. 2.
Rig up.
Stanolind O. & G. Co.'s No. 1 J. C. Hutchinson, 330 ft. S, 330 ft. E of the NW cor. of a 40-ac. tract in the A.C.H.&B. Sur. No. 36.
Rig up.
Stanolind O. & G. Co.'s No. 3 Sneed, 466 ft. at R/A from W line and 466 ft. at R/A from the N line of a 225-ac. tract, A.C. H.&B. Sur. No. 2.
Spudded.
Stanolind O. & G. Co.'s No. 1 B. L. Turner, 495 ft. N of S line, 2,550 ft. E of W line of survey.
10¾-in. csg. 1,886 ft.; T.D. 1,894 ft.
Stanolind O. & G. Co.'s No. 1 Ford, 330 ft. N of S line of 199.37-ac. tract and 1,725 ft. E of W line of A.C.H.&B. Sur. No. 1.
Drlg. sand 541 ft.
Stanolind O. & G. Co.'s No. 1 Williams, 466 ft. N, 1,126 ft. from most easterly SW cor. of 81.3-ac. lease, A.C.H.&B. Sur. No. 1.
Drlg. shale 4,950 ft.
Stanolind O. & G. Co.'s No. 1 Grote, 460 ft. N and W of SE cor. of 71-ac. lease, A.C. H.&B. Sur.
Coring sand 5,905 ft.
Stanolind O. & G. Co.'s No. 2 Sneed, 491.5 ft. E. and 1,590 ft. S from NW cor. of Gilbert Sneed 225-ac. lease, A.C.H.&B. Sur. No. 2.
Coring sand 5,913 ft.
Stanolind O. & G. Co.'s No. 2, J. W. Surface, 375 ft. S and 466 ft. W from easterly NE cor. of 75.9-ac. lease, A.C.H.&B. Sur. No. 2.
Coring shale 5,913 ft.

**MANVEL—BRAZORIA COUNTY**

Burton Drlg. Co.'s No. 1 Beddoe, 150 ft. from S line, 290 ft. E of W line, Lot 29, H.&T.R. Sur. No. 23.
Drlg. sand and shale 3,966 ft.
Jay Simmons' No. 1 Stitt, located in center of W 5 acres of Lot No. 28, H.T.&B. Sur. No. 23.
T.D. 4,008 ft.; 7-in. csg. 3,990 ft.; tested S.W.; drilled to 4,118 ft.; P.B. to 3,990 ft.; testing.
Harrison & Abercrombie's No. 1 Stevens et al, Center of W 5 acres, E of No. 4, A.C.H &B. Sur. No. 91.
T.D. 3,989 ft.; 7-in. csg. 3,948 ft.; flowing 15 bbls. of fluid per hr., 5% S.W.
Texas Co.'s No. 2 Gulf Coast Home Co., 347 ft. S, 441 ft. W from NE cor. of Lot 88, H.T.&B. Sur. No. 2-B.
Rigging up.
J. W. Sorrells' No. 1 Swift, Blk. 21, Abst. 318, H. N. Little Sur.
Derrick.
Texas Co.'s No. 10 Houston Oil Field Assn., 419.5 ft. S, 47 deg., 59 ft. E and 263 ft. N 42 deg., 1 ft. E of W cor. of Lot No. 7, A.C.H.&B. Sur.
T.D. 3,872 ft.; 7-in. csg. 3,975 ft.; I.P. 102 bbls. per day on ¼-in. choke.
Texas Co.'s No. 3 C. P. Dawson, 247.5 ft. S, 449.9 ft. W of NE cor. Lot No. 58, H. T.&B. Sur. No. 23.
T.D. 5,684 ft.; 7-in. csg. 5,654 ft.; I.P. 500 bbls. per day; tubing pressure 550 lbs.; csg. pressure 575 lbs.
Texas Co.'s No. 14-B Belcher, 460 ft. S 42

(Continued on Page 88)

# Completion Near McComb, Ohio, May Be Start of New Pool Development

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, June 3. — The completion of a 50-bbl. well by the Ellarmbro Oil & Gas Co. of Detroit, was the outstanding feature of the week in this territory as it may mean the finding of another pool in the Trenton lime formation. This company holds leases on 2,000 acres, and its first well, brought in with a production of 50 bbls., is on the J. E. Shoop farm, a mile south of McComb. The owners of the well will drill additional wells to give the territory a fair test.

In Shelby County, Eilerman Oil Co.'s No. 1, on the Mrs. H. G. Fisher farm, Section 24, Cynthian Township, produced 5 bbls. initial.

In Hardin County, Bert Sheldon has a rig up for No. 2 Ora Bush farm, Section 31, Blanchard Township. Brown and others are drilling below 500 feet in No. 1 J. E. Shoop farm, Section 25, Pleasants Township, same county.

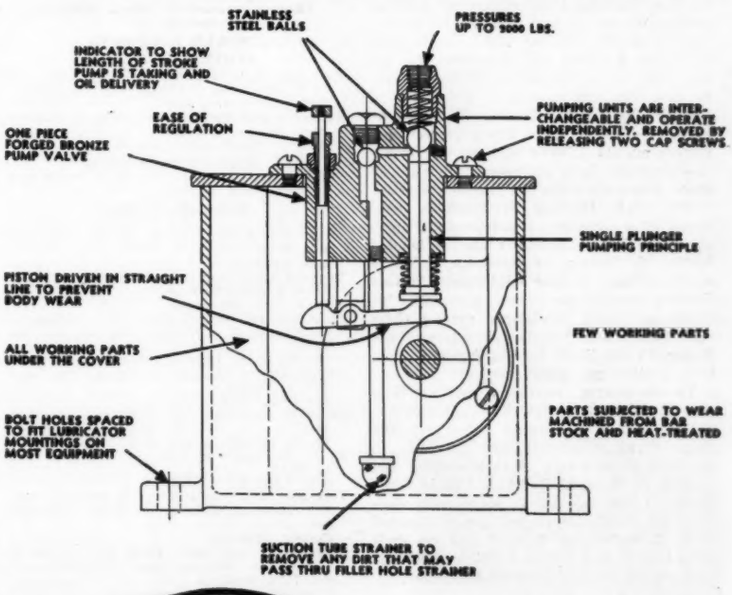
In the Tiffin Field, of Seneca County, the Sandusky Gas Co. is drilling around 1,200 feet in No. 1 on the George Doran farm, Section 3, Hopewell Township. J. L. Barrett is drilling No. 1 T. N. Einsel farm, Section 1, and Phillips & Co. has a rig in for No. 2 on the James D. Watson farm, Section 1, same township.

In Wyandot County, no completions were reported for the week. In this county, Murphy & Co. is drilling below 400 feet in No. 3 on the R. and R. Criswell farm, Section 17, Tymochtee Township. Wyanco Oil & Gas Co.'s No. 5 Gotlieb Seiler farm, Section 34, Crane Township, same county, is shut down at 1,100 feet. R. C. Jones is drilling below 300 feet in No. 1 on the William Walter farm, Section 26, Ridge Township. Newcomer & Co.'s No. 1 Myrtle Williams farm, Section 33, Crane Township, is shut down at 1,200 feet.

In the Tiffin Field, of Seneca County, A. G. Oliphant, oil operator of Tulsa,

(Continued on Page 70)


# Why we call this LUBRICATOR "THE OIL FIELD SPECIAL"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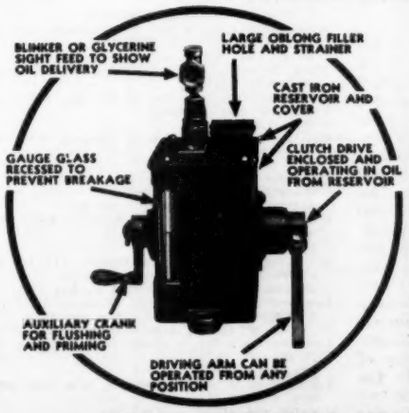
PARTS SUBJECTED TO WEAR MACHINED FROM BAR STOCK AND HEAT-TREATED
SUCTION TUBE STRAINER TO REMOVE ANY DIRT THAT MAY PASS THRU FILLER HOLE STRAINER


BLINKER OR GLYCERINE SIGHT FEED TO SHOW OIL DELIVERY
LARGE OBLONG FILLER HOLE AND STRAINER
CAST IRON RESERVOIR AND COVER
GAUGE GLASS RECESSED TO PREVENT BREAKAGE
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# Busy Wildcatting Campaign Expected in North Louisiana and Southern Arkansas This Year

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., June 3. — With favorable showings of oil or gas reported in several wildcats scattered over widely separated areas in the North Louisiana and Arkansas districts, interest in this phase of activity has increased considerably during the past week. Although desultory wildcatting has been going on in both districts, a large part of the drilling in these areas during the first four months of this year has been in or adjacent to old proven fields. Recently, outside interests are coming in, fully financed, and are assembling blocks of from 3,500 to 10,000 acres on which tests are planned to the Blossom and Woodbine horizons. This is particularly true of the northwestern part of Louisiana, located on what is known as the Sabine uplift. The indications are that the remainder of 1935 will be a busy wildcatting period in this area as well as in South Arkansas.

## NORTH LOUISIANA

The best news of the week in this district was the gas show encountered in Plain Dealing Syndicate's No. 1 L. A. King, Section 36-23-13, in the northern part of Bossier Parish. Drilling reports show streaks of sand in shale from 2,833-39 feet and a drill stem test from 2,826-39 feet developed an estimated flow of 2,000,000 feet of gas. Another core of 1 foot of sand was cut and a drill stem test from 2,826-40 feet increased the initial flow to an estimated 5,000,000 feet of gas. Six-inch casing is being set in the hole for further testing. The wildcat is located on a large block of acreage, approximately 17,000, and several previous attempts have all been failures. The show is coming from the Blossom sand.

The Plain Dealing Syndicate is composed of a number of independent operators of North Louisiana and is headed by L. M. Moffitt of Shreveport. These operators are pioneer wildcatters in this district having discovered a number of fields in North Louisiana, among them the Sligo Field, Bossier Parish and the Sugar Creek Field in Claiborne Parish, both prolific gas producers.

In the central southern part of Bossier Parish, the Oolitic lime gas producing horizon of the upper Trinity in the Sligo Field is assured an extension to the east as a result of tests during the past seven days. United Gas Public Service Co.'s No. 1-A R. V. Kerr unit, Section 24-17-12, developed an estimated flow of 30,000,000 feet of gas on drill stem test from 4,026 to 4,295 feet. Seven-inch casing has been set at 4,002 feet.

### Interesting Wildcat

One of the most interesting wildcats to be spudded in recently in the North Louisiana district is E. T. Oakes' No. 1 H. W. Patton, Section 1-20-5, about 7 miles northeast of the Sugar Creek Field in Claiborne Parish. The latter field produces a highly saturated gas from Oolitic lime around 4,350 feet. The Oakes test is located on what is known as the Lisbon structure and plans to drill to 8,000 feet if necessary. The Blossom and Woodbine sands will be cored carefully and tested in the process of drilling the well. Original explorations in the Sugar Creek area were primarily looking for Blossom production. Although all of the numerous tests to this horizon were failures, the formation contained a good body of sand. Later, the gas production in the upper Trinity was uncovered. About two years ago United Gas Public Service Co. drilled its No. 1 Meadows, Section 13-20-5n, to 6,710 feet and abandoned it as a dry hole. Several months after the well was abandoned, oil began to seep from the hole and it is still making some oil. No determination has been made as to the depth from which this oil is coming. The Oakes test is located on a block of 12,000 acres and is about 3 miles south of the United well. The wildcat will be watched with interest, both as a possible producer from the Blossom sand and the upper Trinity.

The hot spot in the Keatchie area, Caddo-De Soto Parishes, failed to develop anything further during the past seven days. A. D. King, trustee's No. 1 Sallie Roach, Section 4-14-16, is arranging to set 6-inch casing with packer to test from 2,712 feet. Three miles southeast of this test, E. B. Bird and others' No. 1 A. D. John, Section 20-14-16, washed to bottom at 2,630 feet and swabbed dry. The hole will probably be deepened. A test, looking for shallow chalk rock production, Ed Saffold's No. 1 Thigpen, Section 33-13-13, DeSoto Parish, is arranging to use acid in chalk at 1,730 feet. The well is in the vicinity of the Dempsey-Manziel's No. 1 Thigpen, which was recently abandoned around 1,730 feet after swabbing a show of oil. Two East Carroll wildcats are actively making hole. Century Oil & Drilling Co.'s No. 1 Olive Dell, Section 56-21-12e, is drilling at 900 feet, and O. G. Collins and others' No. 1 H. L. Hunt, Section 26-22-13e, is drilling at 1,700 feet. Sterling Oil & Refining Co.'s No. 1 Long-Bell Lumber Co., Section 19-13-9, Red River Parish, has plugged back to 1,175 feet and set 6-inch at 1,125 feet and arranging to test. The old total depth of the well was 3,008 feet. Six miles southwest of production in the Converse Field, Sabine Parish, Laurel Petroleum Co.'s No. 1 Long-Bell Lumber Co., Section 14-8-14, is using acid before testing in the chalk rock at 1,974 feet. Another Sabine wildcat, M. T. Hines' No. 1 J. B. Hill, Section 4-6-11, has set 6-inch at 2,278 feet.

### Poor Completions

The North Louisiana completions fared badly, getting one small gas well and four dry holes out of five. Near the town of Saline in the southern part of Bienville Parish, Saline Drilling Co.'s No. 1 Pardee, Section 27-14-6, was abandoned as dry at 3,819 feet. The well has been shut down at this depth for several months and the only show reported during the process of drilling was a small amount of gas from 4 feet of sand at 2,874 feet. Other completions follow: Caddo Parish, A. F. Tarver's No. 1 George, Section 23-19-15, southeast of the Dixie Field, dry and abandoned at 2,458 feet; DeSoto Parish, D. J. Flesh' No. 1 Farmer, Section 14-12-13, dry at 3,035 feet; Morehouse Parish, Alex Rice, trustee's No. 1 Myers, Section 15-22-7, abandoned as dry at 3,035 feet. This test is about 1 mile from a well drilled several years ago and which reported a good show between 2,900 and 3,000 feet. The present test encountered a good body of sand which was dry. In the Union Parish area of the Monroe gas field, Carbons Consolidated's No. 9 fee, Section 17-21-3e, made a 500,000-foot gasser from 2,148 feet.

## ARKANSAS

This district continues to report a decided lull in drilling activities in comparison with a few months ago after the new sand was uncovered in the Rainbow Field. Two completions and no new locations came from that area during the week. In Grant County, Neill & Winters' No. 1 R. W. Cooper, Section 26-6-15, was abandoned in Paleozoic rock at 1,991 feet. North of the town of Lewisville in Lafayette County, Riggs Brothers' No. 1 J. W. Dubose, Section 35-15-24, was abandoned at 2,817 feet.

Interest in the El Dorado district was focused on Gulf Refining Co.'s deep test in the Smackover area, No. 49 Werner, Section 5-16-16. The test is drilling in hard black lime with a slight show of oil at 6,420 feet. It is reported that a Schlumberger test was made on the well and the results are now being checked. In the old Calion area of Union County Mrs. R. K. Jones' No. 1 Davis, Section 28-16-14, is coring water sand at 3,129 feet. A Ouachita County test, Charles Steele and others' No. 1 Myar estate, Section 16-13-18, is shut down at 1,324 feet, and a wildcat north of Texarkana in Miller County, King Oil Corp.'s No. 1 Anderson, Section 16-14-27, is drilling ahead in red beds at 2,573 feet after testing dry at 2,423 feet.

### Estimated Production

Estimated daily gross production of all companies for the week ending May 31 follows:

| NORTH LOUISIANA | Bbls. |
|---|---|
| Bellevue | 670 |
| Caddo light | 5,095 |
| Caddo heavy | 2,135 |
| Converse | 1,100 |
| Cotton Valley | 445 |
| DeSoto and Red River | 1,380 |
| Elm Grove | 350 |
| Haynesville | 3,540 |
| Holly | 160 |
| Homer | 2,695 |
| Pleasant Hill | 160 |
| Sarepta-Carterville | 530 |
| Urania | 3,675 |
| Zwolle | 1,850 |
| Total | 23,135 |

| SOUTH ARKANSAS | |
|---|---|
| Champagnolle | 2,425 |
| El Dorado | 2,200 |
| Lisbon | 300 |
| Miller County | 1,700 |
| Nevada | 400 |
| Smackover light | 2,310 |
| Smackover heavy | 18,515 |
| Stephens | 425 |
| Urbana | 3,225 |
| Total | 31,190 |

## Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

### NORTH LOUISIANA

#### AVOYELLES PARISH

Bell Oil Co.'s No. 2 Thompson-Koltz, 450 ft. S, 350 ft. E. NW cor. Sec. 11-2n-5e.
Partly R.U. and S.D.
Southern Star Pet. Co.'s No. 1 O. G. Boyette, Sec. 28-3-5e.
S.D. for high wtr. 3,875 ft.

#### BIENVILLE PARISH

Saline Drlg. Co.'s No. 1 Pardee, Sec. 27-14-6.
Dry and abd. 3,819 ft.

#### BOSSIER PARISH

W. A. Kirkland's No. 1 Jarrett & McKeller, 330 ft. N and W, S cor. NW NW Sec. 3-21-13.
S.D. 2,020 ft.
Leonard Co.'s No. 1 Pearson, 250 ft. S and E of C Sec. 22-21-14.
Drlg. 3,125 ft.
Plain Dealing Synd.'s No. 1 L. A. King, 300 ft. S and E, NW cor. NE NE Sec. 36-23-12.
Setting 6-in. 2,823 ft.
Richplane Oil Co.'s No. 1-A S. H. Bollinger, Sec. 22-22-13.
Set 10-in. 40 ft.
Scott & Howard's No. 1 Sherrill, Sec. 13-19-12.
Partly rigged up and S.D.
R. L. Skidmore et al's No. 1 Davis, Sec. 12-18-13.
S.D. 1,150 ft.
Triangle Drlg. Co.'s No. 1-A State of La., Sec. 23-17-12, 1,000 ft. E, 2,640 ft. S, NW cor.
Coring 3,540 ft.
United Gas Pub. Serv. Co.'s No. 1-A R. V. Kerr Unit, NE cor. Sec. 24-17-12.
Set 7-in. 4,002 ft.

#### CADDO PARISH

Alaska Oil Corp.'s No. 1 Dickerson, 150 ft. N and E, SW cor. NW NW.
Drlg. 2,417 ft.
Nick Babare's No. 1 Gibbs, Sec. 16-20-15.
W.O.S.R. 2,265 ft.
J. Ed Bailey, tr.'s No. 1 Hartzo, NW cor. NE NW Sec. 23-22-16.
S.D. 1,236 ft.
Cal-La. Devel. Co.'s No. 1 Glassell, NW NE Sec. 11-19-15.
Set 10-in. 40 ft.
Chandler & Chandler's No. 1 Thigpen & Herold, Sec. 15-20-15.
Set 10-in. 40 ft.; drlg. 1,200 ft.
Hilliman et al's No. 1 J. S. Noel Est., NE NE Sec. 12-20-16.
Drlg. 788 ft.
A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SE Sec. 4-14-16.
Arranging to set 6-in. with packer 2,712 ft.
Leonard Co.'s No. 1 M. A. Dickson, 1,650 ft. S, 1,260 ft. E, NW cor. Sec. 36-21-15.
Set 10-in. 45 ft.; drlg. 645 ft.
Leonard Co.'s No. 2 Green, SW SW Sec. 8-20-15.
Rigging up.
Leonard Co.'s No. 1 Kuhn, C N½ NW SW Sec. 7-20-15.
Drlg. 957 ft.
Press & Lambert's No. 2 Hughes, 350 ft. N and W of C Sec. 15-20-15.
Rigging up.
Recovery Oil Co.'s No. 1 W. L. Sibley, Sec. 15-19-14.
Arranging to set csg. 2,448 ft.
A. C. Scott et al's No. 1 Noel Est., 330 ft. S and E, NW cor. Sec. 22-20-15.
W.O.S.R. 2,261 ft.
Shreveport Oil Corp.'s No. 5-B Muslow, 150 ft. S, 1,320 ft. E, NW cor. Sec. 9-20-1a.
S.D.; high wtr.; 2,167 ft.
Simplex Oil Co.'s No. 1 Keeth, 660 ft. N and E, SW cor. SE Sec. 18-20-14.
P.B. from 2,748 ft.; to test.
A. F. Tarver's No. 1 George, 330 ft. N and E, SW cor. NE NE Sec. 23-19-15.
S.W. and abd. 2,458 ft.
Texas Co.'s No. 4 School fee, Sec. 16-20-15.
Set 6-in. 2,159 ft.
Texas Co.'s No. 2 Thigpen, 300 ft. S and E, C Sec. 15-20-1a.
Set 6-in. 2,182 ft.
C. A. Tooke's No. 1 Gibbs, NE SE Sec. 16-20-15.
Set 6-in. 2,200 ft.; T.D. 2,224 ft.

#### CALDWELL PARISH

Critchell & Woods' No. 1 Kraft, 230 ft. N and W, SE cor. NW NE Sec. 18-11-3e.
Drlg. 1,395 ft.
G. W. Zeigan et al's No. 1 La.-Central Lbr. Co., 175 ft. S and E, NW cor. SW SW Sec. 25-13-3e.
Set 10-in. 200 ft.

#### CATAHOULA PARISH

Geo. J. Phillips' No. 1 La.-Central Lbr. Co., 127 ft. N, 2,490 ft. W, SE cor. Sec. 2-9-6e.
Tested; estimated 500,000 ft. gas, 943 ft.

#### CLAIBORNE PARISH

E. T. Oakes' No. 1 H. W. Patton Est., 660 ft. S and W, NE cor. Sec. 1-20-5w.
Drlg. 260 ft.

#### DESOTO PARISH

E. B. Bird et al's No. 1 J. H. Johns, 330 ft. N and W, center Sec. 20-14-6.
Swbd. dry 2,630 ft.
W. T. Coleman's No. 1 Walker, 330 ft. N, 660 ft. W, SE cor. SE SW Sec. 18-12-11.
Set 16-in. 21 ft.; T.D. 816 ft.
DeSoto Pet. Co.'s No. 1 B. Y. Wemple, C S½ SE NE SW Sec. 14-12-11.
Arranging to set csg. 2,590 ft.
D. J. Flesh et al's No. 1 Farmer, 660 ft. S, 610 ft. E, NW cor. SE NE Sec. 14-12-13.
Dry and abd. 3,035 ft.
E. L. Foster's No. 1 Youngblood, Sec. 9-11-14.
Arranging to set csg. 2,860 ft.
P. G. Fraley et al's No. 1 G. R. Stell, 330 ft. S and W, NE cor. Sec. 5-12-16.
Rigging up.
Leslie Prod. Co.'s No. 1 Ramsey, 150 ft. N and W of C Sec. 36-11-11.
Set 10-in. 45 ft.
National Oils, Inc.'s No. 1 B. Y. Wemple, NW SW Sec. 14-12-11.
S.D. 120 ft.
Ben F. Smith et al's No. 1 Porter, 330 ft. N and E, SW cor. NW Sec. 25-12-13.
S.D.; repairing rig, 3,115 ft.
Ed Saffold et al's No. 1 Thigpen, 400 ft. S, and 305 ft. W, NE cor. SW NE Sec. 33-13-13.
Arranging to use acid, 1,730 ft.

#### EAST CARROLL PARISH

Century Oil & Drlg. Co.'s No. 1 Olive Dell,

(Continued on Page 91)

# Montebello Indicated Likely of More Importance; Semi-Tropic Gas Field Is Broadening Out

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., June 3.—The Universal Consolidated Oil Co., following an exhaustive test on No. 2 Nutt in the Montebello Field of Los Angeles Basin, decided to deepen the well and it ran into such good showings at 5,526 feet the company has expectations of picking up the Cruz zone substantially higher in No. 2 Nutt than in No. 1 Cruz, the discovery. No. 2 Nutt appears to be running about 150 higher structurally and if this proves true operators should watch this field because it may prove of more importance than Playa Del Rey and other fields nearing peak production.

### Gas Fields

The Semi-Tropic gas field of Kern County shows indications of becoming important. The Standard Oil Co. discovered this field several weeks ago. Fullerton Oil Co. has two wells indicating commercial production. In Section 14-27-23 Fullerton Oil Co.'s No. 27 showed a preliminary potential of 15,000,000 feet of dry gas per day from 2,750 feet. It was open only on a formation test for three minutes.

Fullerton's No. 76 in Section 1-27-22 showed a potential of 2,350,000 feet of dry gas from 2,412 feet on a formation test but may do considerably better. Both wells appear to be higher structurally than Standard's discovery well. This field has broadened out and Milham Exploration is making preparations for a well in Section 15-27-23. Standard is rigging up No. 1 Towle and is building two new rigs in Section 9-27-23. In the Delano gas field Standard is making preparations to finish one well and start another. This field was uncovered by Trico Oil & Gas Co. several months ago, but its importance was not recognized until the Standard completed a large gas well.

### Playa Del Rey

Lor-Mar Oil & Development Co.'s No. 1 Del Rey in the Playa Del Rey Field failed to show sufficient kick to result in a natural flow. The company put it on a compressor after plugging back from 6,874 feet to 6,725 feet, and it showed an initial daily production of 488 bbls. of 21.9 gravity, cut 4 per cent. Union Oil Co.'s No. 9 Vidor, finished a week ago, showed a potential daily production of 3,185 bbls. with a cut of less than 1 per cent and testing 22.1 degrees. There are several potential producers nearing completion.

### Long Beach

In the Long Beach Field Alum Rock Oil Co.'s No. 1 Signal, finished at 4,550 feet after the hole had been plugged back from 4,600 feet, showed an initial of 283 bbls. of 25.9 gravity, cutting 21 per cent. Frank Argood's No. 1 Security showed a favorable initial but the water cut, 14 per cent, was substantially in excess of pipe line requirements. This well, finished at 4,185 feet, was put on a compressor. M. K. T. Oil Co.'s No. 1 Signal showed an initial of 223 bbls. of 27.1 gravity, cutting 4 per cent upon completion at 4,615 feet after the hole had been plugged back from 4,625 feet. Shell's No. 1 Hutton was recompleted pumping 112 bbls. of 26.9 gravity oil after the hole had been redrilled and deepened to 4,175 feet. Alum Rock Oil Co.'s well was given a preliminary production test a few weeks ago and the production is the result of remedial work.

### Mountain View

The Mountain View Field of Kern County came back with three good wells. Hogan Petroleum's No. 4 Wharton, finished at 5,644 feet, was brought in flowing 4,987 bbls. of 29.8 gravity. Mohawk's No. 2 Vineyard was good for only 541 bbls. of 27.8 gravity upon completion at 5,308 feet. A. T. Jergins Trust's No. 5 Huckabee was good for only 121 bbls. from 5,761 feet.

In the Edison Field of Kern County Woodward Oil Co.'s No. 2 in Section 31-29-30 was good for 41 bbls. of 14.1 gravity from 497 feet. Mountain View Oil Co.'s No. 1 in Section 12-30-28, more in line with Mountain View than Edison, was brought in pumping 181 bbls. of 22.1 gravity from 5,122 feet.

### Kettleman Hills

It has been a long time since Kettleman North Dome Field reported completion of a large well. Standard Oil Co.'s No. 45-35-J in Section 35-21-17 was brought in flowing 6,493 bbls. of 34.4 gravity oil following completion at 8,345 feet. It was cemented at 7,550 feet and has perforations at 7,565-7,688 feet, 7,777-7,987 feet, 8,033-8,109 feet and at 8,191-8,339 feet. There are a number of wells scheduled for completion in the next 60 days and it is indicated operators will continue restricted drilling for several months. Union Oil Co. is making progress in redrilling No. 1 Lillis-Welsh, but it will be a few months before the outcome is determined. Not a single barrel of crude was produced in the Middle Dome during April or May. Most of the wells have paid out and the Middle Dome Corp. will soon be in a position to take over operation of this field. It was determined several months ago not enough wells had been finished to justify operation and Standard Oil Co. was given permission to drill a second well. All wells drilled and completed in the Middle Dome become the property of the Middle Dome Corp. as soon as they have liquidated drilling and operation costs.

In the Mount Poso Field of Kern County, Shell Oil Co. completed No. 14 Security, pumping 1,110 bbls. of 16.7 gravity upon completion at 1,875 feet. In the Midway-Sunset Field of Kern County, E. R. Bardwell completed No. 2 Bull pumping 101 bbls. of 16.2 gravity from 1,542 feet, cutting approximately 13 per cent.

### Lost Hills-Belridge

Union Oil Co. has started drilling two wells in the North Belridge Field of Kern County but has been having a lot of trouble with one due to inability to maintain circulation. In No. 19 Belridge circulation was lost at 640 feet but was regained after pumping in 50 sacks of cement. Circulation was lost at 650 feet but regained at 680 feet. It was lost at 740 feet but regained after the drill pipe had been pulled to 550 feet. Circulation was lost at 802 feet and another batch of cement and weight material was pumped. These two wells are being drilled to keep crews busy as the company has no intention of violating curtailment.

Over in the Fruitvale Field of Kern County, Western Gulf Oil Co.'s No. 1 West was brought in flowing 358 bbls. of 23.8 gravity from 3,901 feet. George F. Getty's No. 9 Grady was completed pumping 291 bbls. of 16.1 gravity from 2,115 feet. Considerable new work is being undertaken on the west front of the Kern River Field.

In the McKittrick Field of Kern County Welport Oil Co.'s No. 107 was finished pumping 241 bbls. of 16.1 gravity, cutting 18 per cent from 1,216 feet. In the Capitan Field Shell Oil Co.'s No.

**TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS**

| | May 19 Total this week | May 19 Daily average | May 12 Total last week | May 12 Daily average | This year to date | Same time last year |
|---|---|---|---|---|---|---|
| Intercoastal-Domestic— | | | | | | |
| Fuel oil | ..... | ..... | ..... | ..... | ..... | 6,181,514 |
| Diesel and gas oil | ..... | ..... | ..... | ..... | 537,098 | 931,159 |
| Gasoline | 276,380 | 39,483 | 73,894 | 10,556 | 2,894,713 | 2,510,407 |
| Kerosene | ..... | ..... | ..... | ..... | 592,040 | 552,406 |
| Other finished oil | ..... | ..... | ..... | ..... | ..... | 15,171 |
| Foreign exports— | | | | | | |
| Crude oil | 392,241 | 56,034 | 295,904 | 42,272 | 4,354,402 | 3,167,630 |
| Fuel oil | 231,510 | 33,073 | 248,373 | 35,482 | 4,658,260 | 5,103,943 |
| Diesel and gas oil | 303,559 | 43,366 | 24,771 | 3,532 | 1,713,964 | 1,713,861 |
| Gasoline | 108,152 | 15,450 | 142,408 | 20,344 | 1,840,652 | 1,696,108 |
| Kerosene | 75,950 | 10,850 | 39,288 | 5,613 | 509,986 | 774,399 |
| Other finished oil | ..... | ..... | ..... | ..... | ..... | 3,529 |
| Other unfinished oil | ..... | ..... | ..... | ..... | 56,161 | 127,271 |
| Coastwise-domestic— | | | | | | |
| Crude oil | ..... | ..... | 148,059 | 21,151 | 2,223,941 | 4,145,360 |
| Fuel oil | 357,672 | 51,096 | 274,672 | 39,239 | 3,383,802 | 4,373,103 |
| Diesel and gas oil | 54,004 | 7,715 | ..... | ..... | 380,617 | 349,134 |
| Gasoline | 371,661 | 53,094 | 117,116 | 16,731 | 3,432,121 | 4,442,539 |
| Kerosene | 4,291 | 613 | ..... | ..... | 47,048 | 74,418 |

**TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS**

| | | | | | | |
|---|---|---|---|---|---|---|
| Intercoastal-domestic— | | | | | | |
| Fuel oil | ..... | ..... | ..... | ..... | ..... | 49,995 |
| Diesel and gas oil | ..... | ..... | ..... | ..... | 157,258 | 448,112 |
| Gasoline | ..... | ..... | ..... | ..... | ..... | 72,625 |
| Kerosene | ..... | ..... | ..... | ..... | 149,715 | 197,498 |
| Asphalt | 71,172 | 10,025 | ..... | ..... | 142,497 | ..... |
| Lubricants | 7,169 | 1,024 | ..... | ..... | 19,550 | 18,331 |
| Foreign exports— | | | | | | |
| Crude oil | 271,003 | 38,715 | ..... | ..... | 1,103,285 | 737,212 |
| Fuel oil | 108,305 | 15,472 | 20,188 | 2,884 | 693,760 | 664,391 |
| Diesel and gas oil | 58,972 | 8,425 | ..... | ..... | 459,774 | 662,079 |
| Gasoline | 261,133 | 37,305 | ..... | ..... | 1,131,043 | 1,380,224 |
| Kerosene | 62,409 | 8,916 | ..... | ..... | 278,692 | 348,497 |
| Lubricants | 12,565 | 1,795 | ..... | ..... | 86,976 | 72,395 |
| Other finished oil | ..... | ..... | ..... | ..... | ..... | 2,760 |
| Other unfinished oil | ..... | ..... | ..... | ..... | ..... | 5,750 |
| Coastwise-domestic— | | | | | | |
| Fuel oil | 62,918 | 8,988 | 298,302 | 42,615 | 2,742,977 | 1,556,587 |
| Diesel and gas oil | ..... | ..... | 9,060 | 1,294 | 98,883 | 95,371 |
| Gasoline | 83,863 | 11,980 | 129,726 | 18,532 | 1,661,544 | 1,552,669 |
| Kerosene | ..... | ..... | ..... | ..... | 18,109 | 48,112 |

**IMPORTANT SOUTHERN CALIFORNIA WILDCATS**

| Company, well and location— | S.T.R. | Depth | Status: |
|---|---|---|---|
| Macrate, A. M., No. 1 Athens, Los Angeles Co. | 18- 3-13 | 6,200 | wet |
| Republic Pet., No. 1 Lawndale, Los Angeles Co. | 18- 3-14 | 5,004 | suspended |
| Associated Oil Co., No. 4 Inglewood Deep, Los Angeles Co. | 7- 2-14 | 1,471 | sd. sh. drlg. |
| Scientia Oil Co., No. 1 Inglewood Deep, Los Angeles Co. | 7- 2-14 | 4,051 | sd. sh. drlg. |
| Standard Oil Co., No. 5 Inglewood Deep, Los Angeles Co. | 17- 2-14 | 6,284 | suspended |
| Standard Oil Co., No. 6 Inglewood Deep, Los Angeles Co. | 17- 2-14 | 4,180 | P.B. 4,060 |
| Shell Oil Co., No. 3 Inglewood Deep, Los Angeles Co. | 8- 2-14 | .... | rigging up |
| Ohio Oil Co., No. 17 Del Rey, Los Angeles Co. | 28- 2-15 | 3,655 | redrlg. 2,230 |
| Bel-Mar Oil Co., No. 1 Del Rey, Los Angeles Co. | 27- 2-15 | 2,780 | suspended |
| Harper & Williams, No. 1 Del Rey, Los Angeles Co. | 27- 2-15 | 4,971 | sd. sh. drlg. |
| Coast Oil Co., No. 1 Del Rey, Los Angeles Co. | 27- 2-15 | 6,634 | cmtd. 6,440 |
| Dabney Pet. Co., No. 1 Del Rey, Los Angeles Co. | 27- 2-15 | .... | bldg. rig |
| Ritelube Oil Co., No. 1 Del Rey, Los Angeles Co. | 27- 2-15 | 7,048 | rig compress'r. |
| Mathews Pet. Co., No. 1 Del Rey, Los Angeles Co. | 27- 2-15 | 5,460 | redrlg. 5,130 |
| Birch Royer Oil Co., No. 1 Del Rey, Los Angeles Co. | 14- 2-15 | 5,940 | sd. sh. drlg. |
| Lor-Mar Oil Co., No. 1 Del Rey, Los Angeles Co. | 27- 2-15 | 6,874 | flow 500 b.d. |
| Joyce Oil Co., No. 1 Del Rey, Los Angeles Co. | 27- 2-15 | 6,474 | sd. sh. drlg. |
| Union Oil Co., No. 10 Del Rey, Los Angeles Co. | 27- 2-15 | 6,310 | flow 3,185 b.d. |
| Union Oil Co., No. 11 Del Rey, Los Angeles Co. | 27- 2-15 | 6,049 | cmtd. 6,039 |
| Union Oil Co., No. 12 Del Rey, Los Angeles Co. | 27- 2-15 | 5,671 | sd. sh. drlg. |
| Big Ben Oil Co., No. 1 Del Rey, Los Angeles Co. | 27- 2-15 | 6,470 | testing |
| Doyle Pet. Co., No. 1 Manhattan, Los Angeles Co. | 30- 3-14 | 7,040 | schist, drlg. |
| West American Oil Co., No. 1 Bandini, Los Angeles Co. | 17- 2-12 | 1,008 | sd. sh. drlg. |
| Western Gulf, No. 1 Bandini, Los Angeles Co. | 16- 2-12 | 4,551 | sd. sh. drlg. |
| Vanco Dev. Co., No. 1 Artesia, Los Angeles Co. | 25- 3-12 | 3,896 | sd. sh. drlg. |
| Monarch Oil Corp., No. 1 Topanga, Los Angeles Co. | 5- 1-16 | .... | rig, suspended |
| Texas Co., No. 1 Montebello, Los Angeles Co. | 5- 2-11 | 3,392 | hd. sd. drlg. |
| Universal Consd., No. 2 Montebello, Los Angeles Co. | 5- 2-11 | 5,573 | deepening |
| Woodward Oil Co., No. 1 Montebello, Los Angeles Co. | 4- 2-11 | .... | rigged up |
| Wilshire Oil Co., No. 1 Montebello, Los Angeles Co. | 5- 2-11 | 1,691 | sd. sh. drlg. |
| Frontier Oil Co., No. 1 Pico, Los Angeles Co. | 7- 2-11 | 3,600 | suspended |
| Pressell & Tull, No. 1 Puente Hills, Los Angeles Co. | 30- 2- 9 | 4,373 | hd. sd. drlg. |
| Barstow Oil Co., No. 1 Saugus, Los Angeles Co. | 35- 5-16 | 4,000 | sd. sh. drlg. |
| International Dev. Co., No. 1 Saugus, Los Angeles Co. | 34- 5-16 | 4,335 | suspended |
| Platt & Collins, No. 1 Costa Mesa, Orange Co. | 14- 6-10 | 2,560 | suspended |
| Wilshire Oil Co., No. 1 Newport, Orange Co. | 29- 6-10 | 733 | hd. sd. drlg. |
| Great American Pet. Co., No. 2 East Coyote, Orange Co. | 22- 3-10 | 3,474 | pump wtr. |
| Viking Oil Co., No. 1 Richfield, Orange Co. | 29- 3- 9 | 1,931 | hd. sd. drlg. |
| Great American Pet. Co., No. 4 Chino, San Bernardino Co. | 7- 2- 8 | 921 | hd. sd. drlg. |

*S. W. Cornish, representative for the Sinclair Prairie Oil Co. in the claims department, Fort Worth, Texas*

1-5 Covarrubias was brought in flowing 184 bbls. of 45.4 gravity from 3,043 feet. It was finished with a 6⅝-inch liner carrying 100 feet of perforated. In the Santa Fe Springs Field of Los Angeles Basin General Petroleum recompleted No. 179-G on the Santa Fe lease pumping 214 bbls. of 34.1 gravity after the hole had been plugged back from 8,070 feet to 6,232 feet.

### IMPORTANT NORTHERN CALIFORNIA WILDCATS

| Company, well and location— | S.T.R. | Depth | Status: |
|---|---|---|---|
| Shell Oil Co., No. 4 Capitan, Santa Barbara Co. | 5- 4-30 | 3,043 | flow 182 b.d. |
| General Petroleum, No. 14 Capitan, Santa Barbara Co. | 32- 5-30 | 2,590 | O. S. drlg. |
| General Petroleum, No. 15 Capitan, Santa Barbara Co. | 32- 5-30 | .... | rig, suspended |
| Freeman, M. J., No. 1 Purisima, Santa Barbara Co. | 11- 7-33 | 816 | sd. sh. drlg. |
| Casmite Co., No. 1 Casmite, Santa Barbara Co. | 13- 9-35 | 1,745 | rig to pump |
| Scully & Snyder, No. 1 Naples, Santa Barbara Co. | 7- 4-29 | 6,447 | suspended |
| Barnsdall-Rio Grande, No. 10-83 Elwood, Santa Barbara | tideland | 3,616 | flow 1,040 b.d. |
| Barnsdall-Rio Grande, No. 2 Elwood, Santa Barbara Co. | 15- 4-29 | 6,097 | sd. sh. drlg. |
| Bankline Oil Co., No. 8 Elwood, Santa Barbara Co | tideland | 3,270 | hd. sd. drlg. |
| Signal Oil & Gas Co., No. 4 Elwood, Santa Barbara Co. | tideland | 1,891 | sd. sh. drlg. |
| Caroline Spalding, No. 10 Elwood, Santa Barbara Co. | tideland | 2,660 | hd. sh. drlg. |
| West Elwood Oil Co., No. 1 Goleta, Santa Barbara Co. | 9- 4-28 | 3,715 | may abd. |
| Las Posas Pet., No. 1 Las Posas, Ventura Co. | 22- 3-20 | 8,116 | fishing |
| Calco Pet. Co., No. 1 Las Posas, Ventura Co. | 17- 3-20 | 1,352 | sd. sh. drlg. |
| Union Oil Co., No. 1 Bardsdale, Ventura Co. | 13- 3-20 | 2,415 | sd. sh. drlg. |
| Dabney, H. R., No. 1 Bardsdale, Ventura Co. | 2- 3-19 | .... | bldg. rig |
| Bankline Oil Co., No. 1 Sespe, Ventura Co. | 36- 5-20 | .... | bldg. road |
| Oil Ridge Oil Co., No. 1 Ventura, Ventura Co. | 1- 4-19 | 1,651 | sd. sh. drlg. |
| El Rancho Oil Co., No. 1 South Mountain, Ventura Co. | 9- 3-19 | 1,113 | suspended |
| Texas Co., No. 128 South Mountain, Ventura Co. | 4- 3-19 | 6,798 | hd. sh. drlg. |
| Paloma Oil Co., No. 1 Susana, Ventura Co. | 12- 2-18 | 1,065 | hd. sd. drlg. |
| Boisa Chica Oil Co., No. 2 Piru, Ventura Co. | 4- 4-18 | 2,800 | sd. sh. drlg. |
| High Mesa Oil Co., No. 1 Ojai, Ventura Co. | 16- 4-22 | 631 | sd. sh. drlg. |
| Prop. Service Corp., No. 1 Lloyd, Ventura Co. | 24- 3-23 | 7,652 | gr. sd. drlg. |
| Continental Oil Co., No. 4 San Miguelito, Ventura Co. | 23- 3-24 | 4,594 | sd. sh. drlg. |
| Amerada Pet., No. 3 Blackwell Corner, Kern Co. | 17-26-19 | .... | bldg. rig |
| Standard Oil Co., No. 1 Lost Hills, Kern Co. | 2-26-20 | 4,143 | D.P. stuck |
| Continental Oil Co., No. 1 McDonald, Kern Co. | 7-28-20 | 4,501 | sd. sh. drlg. |
| Belmac Drlg. Co., No. 1 McKittrick, Kern Co. | 22-29-21 | .... | location |
| General Pet. Co., No. 1 South Beiridge, Kern Co. | 30-28-21 | 11,377 | suspended |
| Standard Oil Co., No. 1-A North Beiridge, Kern Co. | 36-27-20 | 8,618 | P.B. 8,539 |
| Standard Oil Co., No. 2 North Beiridge, Kern Co. | 36-27-20 | 7,610 | hd. sh. drlg. |
| Beiridge Oil Co., No. 32-35, North Beiridge, Kern Co. | 35-27-20 | 5,380 | cmtd. |
| Beiridge Oil Co., No. 28-35, North Beiridge, Kern Co. | 35-27-20 | 3,163 | sd. sh. drlg. |
| Union Oil Co., No. 19 North Beiridge, Kern Co. | 36-27-20 | 802 | sd. sh. drlg. |
| Union Oil Co., No. 20 North Beiridge, Kern Co. | 36-27-20 | 316 | sd. sh. drlg. |
| Cimarron Oil Corp., No. 1 Delano, Kern Co. | 14-25-27 | 2,198 | cleaning out |
| Standard Oil Co., No. 1 Delano, Kern Co. | 1-25-23 | 2,455 | gas—shut in |
| Standard Oil Co., No. 2 Delano, Kern Co. | 1-25-23 | 3,256 | completing |
| Standard Oil Co., No. 3 Delano, Kern Co. | 12-25-23 | 2,501 | sd. sh. drlg. |
| Standard Oil Co., No. 4 Delano, Kern Co. | 34-24-23 | .... | rigging up |
| Trico Oil & Gas Co., No. 1 Delano, Kern Co. | 3-25-23 | 2,525 | gas well |
| Trico Oil & Gas Co., No. 3 Delano, Kern Co. | 36-24-22 | 4,835 | P.B. 2,222 |
| Trico Oil & Gas Co., No. 4 Delano, Kern Co. | 3-25-23 | 3,200 | sd. sh. drlg. |
| Baker, Cliff, No. 1 Poso Creek, Kern Co. | 33-27-28 | .... | rig, suspended |
| Associated, No. 2 Kern Front, Kern Co. | 4-28-27 | 2,510 | sd. sh. drlg. |
| Kern River Oilfields, No. 2 Kern Front, Kern Co. | 25-28-27 | .... | rigging up |
| Getty Oil Co., No. 9 Kern Front, Kern Co. | 28-28-27 | 2,115 | pump 290 b.d. |
| Republic Petroleum, No. 1 Kern Front, Kern Co. | 24-28-27 | .... | rigging up |
| Pongratz Oil Co., No. 1 McVan Area, Kern Co. | 2-27-27 | 1,000 | sd. sh. drlg. |
| Golden Bear Oil Co., No. 1 Kern Front, Kern Co. | 32-27-27 | 4,900 | gr. sd. drlg. |
| Stevens Pet. Co., No. 1 Kern Front, Kern Co. | 13-27-27 | 2,401 | sd. sh. drlg. |
| Barnsdall Oil Co., No. 4 Mountain View, Kern Co. | 32-30-29 | 1,130 | sd. sh. drlg. |
| Hancock Oil Co., No. 6 Mountain View, Kern Co. | 14-30-28 | 5,292 | sd. sh. drlg. |
| Hancock Oil Co., No. 7 Mountain View, Kern Co. | 14-30-28 | 1,002 | cmtd. |
| Shell Oil Co., No. 2 Mountain View, Kern Co. | 32-30-29 | 2,983 | sd. sh. drlg. |
| C. C. M. Oil Co., No. 1 Mountain View, Kern Co. | 11-30-28 | 4,681 | sd. sh. drlg. |
| Union Oil Co., No. 6 Mountain View, Kern Co. | 9-30-28 | 7,950 | sd. sh. drlg. |
| Union Oil Co., No. 7 Mountain View, Kern Co. | 15-30-28 | 5,595 | sd. sh. drlg. |
| Union Oil Co., No. 8 Mountain View, Kern Co. | 23-30-28 | 3,960 | sd. sh. drlg. |
| General Petroleum, No. 4 Mountain View, Kern Co. | 14-30-28 | 5,562 | sd. sh. drlg. |
| Vesta Pet. Co., No. 1 Mountain View, Kern Co. | 19-30-29 | 4,432 | sd. sh. drlg. |
| Mohawk Oil Co., No. 10 Mountain View, Kern Co. | 30-30-29 | 5,171 | sd. sh. drlg. |
| Mohawk Oil Co., No. 11 Mountain View, Kern Co. | 30-30-29 | 1,276 | sd. sh. drlg. |
| Hogan Pet., No. 7 Mountain View, Kern Co. | 32-30-29 | 5,844 | flow 3,891 b.d. |
| Sovereign Oil Co., No. 4 Mountain View, Kern Co. | 30-30-29 | 5,161 | sd. sh. drlg. |
| Jergins Trust, No. 5 Mountain View, Kern Co. | 24-30-28 | 5,761 | flow 250 b.d. |
| Standard Oil Co., No. 7 Mountain View, Kern Co. | 13-30-28 | 5,371 | sd. sh. drlg. |
| Standard Oil Co., No. 8 Mountain View, Kern Co. | 23-30-28 | .... | rigged up |
| Star Petroleum, No. 1 Mountain View, Kern Co. | 10-30-28 | 5,301 | resume work |
| Ohio Oil Co., No. 1 Mountain View, Kern Co. | 33-30-29 | 5,990 | suspended |
| Ohio Oil Co., No. 2 Mountain View, Kern Co. | 33-30-29 | 4,162 | sd. sh. drlg. |
| Mountain View Oil Co., No. 1 Mountain View, Kern Co. | 25-30-28 | 5,650 | fish. D.P. |
| Jergins Trust, No. 6 Edison, Kern Co. | 24-30-29 | 1,430 | C.P. 1,407 |
| Jergins Trust, No. 7 Edison, Kern Co. | 13-30-29 | 1,301 | sd. sh. drlg. |
| Jergins Trust, No. 8 Edison, Kern Co. | 24-30-29 | .... | rigging up |
| Shell Oil Co., No. 6 Edison, Kern Co. | 14-30-29 | 2,979 | fishing |
| Shell Oil Co., No. 7 Edison, Kern Co. | 14-30-29 | 2,781 | hd. sd. drlg. |
| Major Oil Co., No. 1 Edison, Kern Co. | 18-30-29 | .... | rig, suspended |
| Chaulk Oil Co., No. 1 Edison, Kern Co. | 5-30-29 | 2,955 | recmtd. 2,798 |
| Nelco Oil Co., No. 1 Edison, Kern Co. | 5-30-29 | 3,081 | sd. sh. drlg. |
| North American, No. 3 Edison, Kern Co. | 14-30-29 | .... | rig, suspended |
| General Pet., No. 6 Edison, Kern Co. | 15-30-29 | 3,353 | sd. sh. drlg. |
| Appling, C. E., No. 1 Edison, Kern Co. | 4-30-29 | 3,016 | will dpn. |
| Goldman, Frank, No. 1 Edison, Kern Co. | 30-29-30 | 963 | hd. sd. drlg. |
| Woodward Oil Co., No. 2 Edison, Kern Co. | 31-29-30 | 497 | pump 41 b.d. |
| Woodward Oil Co., No. 3 Edison, Kern Co. | 36-29-29 | 619 | recmtd. 605 |
| Woodward Oil Co., No. 4 Edison, Kern Co. | 36-29-29 | 445 | sd. sh. drlg. |
| Woodward Oil Co., No. 5 Edison, Kern Co. | 36-29-29 | 375 | sd. sh. drlg. |
| General Pet., No. 1 Arvin, Kern Co. | 1-32-29 | 4,154 | cleaning out |
| Tejon Ridge Oil Co., No. 1 Comanche, Kern Co. | 23-32-29 | 1,797 | suspended |
| Hall-Baker Co., No. 1 Arvin, Kern Co. | 16-31-30 | 1,250 | cleaning out |
| Hall-Baker Co., No. 2 Arvin, Kern Co. | 17-31-30 | 1,185 | granite, abd. |
| Hutcheson & Osborne, No. 1 Arvin, Kern Co. | 32-30-30 | .... | rigging up |
| Sea Cliff Oil Co., No. 1 Greenfield, Kern Co. | 7-31-28 | 6,551 | sd. sh. drlg. |
| Fullerton Oil Co., No. 1 Semi-Tropic, Kern Co. | 1-27-22 | 2,412 | gas well |
| Fullerton Oil Co., No. 2 Semi-Tropic, Kern Co. | 14-27-23 | 2,750 | gas well |
| Fullerton Oil Co., No. 3 Semi-Tropic, Kern Co. | 9-27-22 | .... | rigging up |
| Standard Oil Co., No. 1 Semi-Tropic, Kern Co. | 8-27-22 | 3,200 | producing gas |
| Standard Oil Co., No. 2 Semi-Tropic, Kern Co. | 5-27-22 | 2,996 | sd. sh. drlg. |
| Standard Oil Co., No. 3 Semi-Tropic, Kern Co. | 7-27-22 | .... | rigging up |
| Standard Oil Co., No. 4 Semi-Tropic, Kern Co. | 9-27-22 | .... | location |
| Standard Oil Co., No. 5 Semi-Tropic, Kern Co. | 9-27-22 | .... | bldg. rig |
| Milham Expl. Co., No. 1 Semi-Tropic, Kern Co. | 15-27-22 | .... | rigging up |
| Shell Oil Co., No. 1 Buena Vista, Kern Co. | 9-32-25 | 6,402 | sd. sh. drlg. |
| Bender, E. L., No. 1 Temblor, Kern Co. | 2-29-20 | 751 | sd. sh. drlg. |
| Reserve Oil & Gas Co., No. 1 Tejon, Kern Co. | 2-10-19 | 2,699 | rig to pump |
| Silver Gate Oil Co., No. 1 Tejon, Kern Co. | 7-10-19 | 281 | sd. sh. drlg. |
| Taft Well Drlg. Co., No. 1 Kreyenhagen, Fresno Co. | 32-22-16 | 1,771 | sd. sh. drlg. |
| Standard Oil Co., No. 1 Coalinga, Fresno Co. | 13-20-14 | 490 | cmtd. 474 |
| Wellington Oil Co., No. 1 Coalinga, Fresno Co. | 14-20-14 | 1,170 | sd. sh. drlg. |
| Milham Expl. Co., No. 1 Ora Loma, Fresno Co. | 12-12-11 | 5,451 | hd. sd. drlg. |
| Russ Oil Synd., No. 1 Ora Loma, Fresno Co. | 28-12-11 | 5,079 | suspended |
| Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co. | 24-21-16 | 10,944 | redrlg. 8,185 |
| K. N. D. A., No. 56, Kettleman, Kings Co. | 8-22-18 | 10,262 | gr. sd. drlg. |
| Standard, No. 2 Kettleman Middle, Kings Co. | 29-23-19 | 6,520 | sd. sh. drlg. |
| Continental Oil Co., No. 1 Kettleman-South, Kern Co. | 7-25-20 | 6,197 | hd. sd. drlg. |
| Farrel Pet., well No. 1, San Luis Obispo Co. | 18-31-12 | 1,655 | sd. sh. drlg. |
| Willett Oil Co., No. 1 Cholame, San Luis Obispo Co. | 10-25-15 | 3,687 | suspended |
| Kings River Oil Pool, well No. 1, Tulare Co. | 29-16-23 | 3,265 | will redrill |
| Schuster, C. R., No. 1 Tulare, Tulare Co. | 27-22-23 | .... | rig, suspended |
| Commonwealth Consd. Gas Co., No. 1 Tulare Lake, Kings | 31-22-20 | 2,490 | gas well |
| Commonwealth Consd. Gas Co., No. 2 Tulare Lake, Kings | 31-22-20 | 491 | suspended |
| Amerada Pet., No. 1 F.L.D., San Joaquin Co. | 15- 2- 5 | 4,861 | hd. sh. drlg. |
| Pure Oil Co., No. 1 Chowchilla, Madera Co. | 7-10-14 | 5,402 | gas well, idle |
| Northern Counties Pet., No. 1 Tehama Co. | 25-24- 3 | 4,152 | hd. sh. drlg. |
| Texas Co., No. 1 Petrolia, Humboldt Co. | 1- 3- 2 | 6,000 | sd. sh. drlg. |
| Shell Oil Co., No. 1 Branch, Monterey Co. | 34-24-10 | 1,362 | sd. sh. drlg. |

## Central West Fields

(Continued from Page 67)

has taken 10 leases on lands which have previously furnished heavy production.

### CENTRAL OHIO FIELD

In Ashland County, in the Central Ohio Field, the Ohio Fuel Gas Co.'s No. 1, on the J. W. Mutchler farm, Section 3, Hanover Township, was a dry hole at 2,933 feet.

In Lorain County, Schneider & Wyles' No. 2, on the A. L. Mills farm, Section 6, Ridgeville Township, was a dry hole at 2,498 feet. Minor and others are drilling No. 3 Mathias Myers farm, Section 32, same township.

In Richland County, three tests are under way. In Weller Township, Spohn & Nachman are drilling No. 1 Uranna Freer farm; Ohio Fuel Gas Co., No. 1 L. C. Benedict farm, Worthington Township, and in Jefferson Township, J. B. Reed is drilling No. 1 on the Kenneth McConkie farm, same county.

In Summitt County, the Pawnee Corp.'s No. 1, on the Henry Harvis farm, Section 2, Talmadge County, is drilling around a depth of 3,510 feet. Lyons and others are drilling below 3,700 feet, and the East Ohio Gas Co. is shut down at 275 feet.

In Coshocton County, Preston Oil Co. is drilling No. 1-1,574, on the William Frazee farm, in Newcastle Township, and the same company has a location for No. 4-1,580 on the C. D. Mossholder farm, same township. C. C. Moore is drilling No. 2 on the J. LeRetilly farm, Section 20, Jefferson Township, same county.

In Stark County, East Ohio Gas Co. is drilling below 4,155 feet in No. 1 on the T. and R. Scheetz farm, Section 3, Jackson Township, and the same company is drilling below 3,975 feet in No. 2 George Ledithermann farm, Section 11, same township. In Plain Township, same county, East Ohio Gas Co. is drilling No. 1 Enos R. Mathie farm, Section 8, same township.

In Perry County, the Hopewell Gas & Fuel Co.'s No. 1 L. V. Kullman farm, Section 16, is a gas well at a depth of 3,004 feet.

In Fairfield County, City Natural Gas Works' No. 3 F. A. Ruff farm, Section 31, Rush Creek Township, is a gas well at 2,602 feet. Same company has a rig in for No. 1 Thomas Kelley farm, same section.

### KENTUCKY FIELD

Six completions were reported from the Kentucky fields. W. E. Hupp and others' No. 1 Wavie Smith farm, Hancock County, was dry in the Jet sand.

In Ohio County, Snowden-McSweeney's No. 7 F. E. Midkiff farm, in the Oak Pool, produced 10 bbls. initial, and the same company's No. 18 on the H. J. O'Dells' 365 acres, same pool, produced an initial of 125 bbls. Chester Oil Co.'s No. 1 Bolling and Bartlett farm, Maddox Pool, had an initial of 30 bbls. In the Deanfield Pool, same county, the Inland Oil & Gas Co.'s No. 2 had an initial of 5 bbls. In Oak Pool, the Sunflower Oil Co.'s No. 5, on the Sally Jones farm, was a dry hole.

A party of lease men for the Eastern Gulf Oil Co., a subsidiary of the Gulf Oil Corp., is checking Callaway County, in western Kentucky, and taking oil and gas leases. The Gulf is assembling a block 7 to 8 miles due west of the Tennessee River.

sissippi holdings in Greene and George Counties.

### TENNESSEE

Tennessee is being closely watched by the industry, and much acreage is being leased up and drilling activity will be closely watched, and according to talk, Kentucky and Tennessee are due for greater activity than for a long period.

### MISSISSIPPI

Gulf Refining Co. is moving a pendulum party from Southeast Louisiana to Stone County, South Mississippi, this making three types of geophysical work being used on its South Mississippi holdings, it already having torsion balance and seismograph crews at work. United Gas Public Service Co. is continuing its geophysical work on its Southeast Mis-

## Dividend Disbursements Are Largest Since 1931

Cash dividend payments by the companies of the Standard Oil group for the second quarter of 1935 are estimated at $63,571,466 compared with $58,708,391 in the corresponding quarter of 1934, according to records compiled by Carl H. Pforzheimer & Co.

A total of $18,122,717 was distributed in the first quarter of this year, which, however, is not directly comparable with second quarter distributions, since several of the larger members of the group are on a semiannual dividend basis with payments being made in the second and fourth quarters.

Increased payments by International Petroleum Co., Ltd., and Imperial Oil, Ltd., are responsible for the larger aggregate disbursements this quarter when compared with the similar period last year. The increases of these two companies more than offset the decline occasioned by the absence of a dividend in the current quarter by Socony-Vacuum Oil Co. which, upon declaration of the first quarter dividend announced it would change its dividend period to a semiannual one and that payments in the future would be made in March and September.

International Petroleum Co., Ltd., declared a semiannual dividend of 75 cents a share and a special dividend of 50 cents a share, compared with semiannual dividends of 56 cents and extras of 44 cents a share paid in June and December last year. This company's distribution of approximately $17,900,000 in the current quarter is larger than that of any other member of the group, a distinction long held by the Standard Oil Co. (New Jersey), whose semiannual dividend of 50 cents a share comes to about $12,900,000, an amount also exceeded by Imperial Oil, Ltd.

Standard Oil Co. (New Jersey), however, in the first quarter this year distributed in the form of a stock dividend, 1,399,345 shares of Mission Corp. capital stock which on date of distribution, March 15, 1935, had a total market value of approximately $13,206,000.

Imperial Oil, Ltd., which controls International Petroleum and is in turn controlled by Standard of New Jersey, will pay a semiannual dividend of 25 cents a share and a special dividend of 37½ cents a share or a total of $16,825,000. This compares with similar semiannual dividends and extras of 15 cents a share in the second and fourth quarters of 1934.

Two of the smaller members of the group—Standard Oil Co. of Kansas and Standard Oil Co. of Nebraska—which were on a dividend basis at this time last year have since suspended payments.

The record of quarterly disbursements in recent years follows:

| | First quarter | Second quarter | Third quarter | Fourth quarter | Full year |
|---|---|---|---|---|---|
| 1935 | $18,122,717 | $63,571,466 | ..... | ..... | ..... |
| 1934 | 24,256,981 | 58,708,391 | $18,582,965 | $67,089,092 | $166,636,529 |
| 1933 | 22,406,332 | 34,527,547 | 19,546,576 | 42,457,320 | 128,935,375 |
| 1932 | 46,801,055 | 46,278,873 | 43,855,468 | 44,112,501 | 181,050,896 |
| 1931 | 63,101,797 | 57,843,467 | 51,263,680 | 48,530,230 | 220,739,183 |
| 1930 | 66,687,168 | 68,555,901 | 68,271,015 | 33,012,644 | 236,526,728 |

### VEGREVILLE GAS PROJECT

VEGREVILLE, Alberta, June 1.—Vegreville Natural Gas Co., Ltd., has been incorporated under Alberta charter to supply natural gas to the town of Vegreville. The company is sponsored by Northwest Utilities, Ltd., of Edmonton, but will probably develop its own supply in the Vegreville district. A franchise, under which rates will be determined by the Alberta Public Utilities Commission, will be submitted to the Vegreville ratepayers.

# Shows in South Turner Valley Test May Prove Structure on Considerable Area

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, June 1.—In the South Turner Valley Field, Publix Oil & Gas Co.'s No. 1, LSD 8, Section 28-18-2w5, bottoming at 5,524 feet, was shot with 800 quarts. It had good shows of light crude in the upper horizons, got the Madison limestone at 4,910 feet, but developed only a comparatively small wet gas production after drilling 614 feet into the lime. The shot apparently doubled the wet gas flow, and the well has been hooked up for a production test.

In the same section British Dominion Oil & Development Corp.'s No. 4, LSD 6, is in the "crooked hole" sand below 5,400 feet. Renfrew Royalties' No. 1 Morris & Goodfellow, LSD 3, is below 5,100 feet and getting close to the Home sand. It got a fair show of crude in the Dakota around 4,360 feet and a potential production of 35 bbls. around 4,600 feet. The oil shows at these horizons were considerably better than in most Turner Valley tests, and operators are awaiting with interest drilling in the potential Home and Dalhousie sands. The location is on the west side of the structure, and finding of these markers at drilling depth at this location will prove structure over a considerable area.

In Central Turner Valley, McLeod Oil Co.'s No. 3, LSD 16, Section 1-20-3w5, has been cleaned out and is making 15 to 20 bbls. of light crude per day from sands above the Madison limestone.

In the North Turner Valley Field, Model Oils' No. 3, LSD 1, Section 22-20-3w5, is rigging.

### Tests in the Foothills

On the Watson structure, north and west of Lundbreck, Mar Jon Oil Co.'s No. 3, LSD 3, Section 4-10-2w5, has resumed from 1,485 feet after running 16-inch casing. It had a small show of crude at 1,110 feet.

On the Moose Dome structure, E. B. Clarke and associates of Vancouver have resumed work on Moose Oils' No. 1, LSD 16, Section 29-22-6w5. It will be cleaned out and either deepened from 2,810 feet or the gas flow utilized in drilling a new test. At this depth it is 2,260 feet in the Devonian lime with a fair potential wet gas flow. It had a small show of crude in the Devonian at 2,220 feet.

### Wainwright Field

In the Wainwright Field, east central Alberta, Onalta Oils' No. 1 producer, LSD 8, Section 20-45-6w4, was damaged by fire which destroyed the boiler house and derrick. The well was owned by Western Consolidated Oils, Ltd., and has been in production since 1930, with a small pumping production from sands at 2,145 and 2,221 feet. Production has been taken by Gold Standard Oils refinery at Wainwright. The well will be refitted.

### Vermilion Gas Test

In the Vermilion district, Tenwell Gas & Oil Co.'s No. 1, LSD 9, Section 36-50-7w4, a short distance west of Vermilion, is below 418 feet. The test, drilled for gas for the town of Vermilion, has encountered several pockets of gas and small shows of oil. The Lea Park-Benton formation was reached some time ago. Tests of the water shutoff will necessitate two or three weeks' shutdown.

### British Columbia

In the Sage Creek area of southeastern British Columbia, Columbia Oils' No. 1 is in softer formation below 3,293 feet with shows of oil and gas continuing. Sage Creek Exploration Co., subsidiary of London-Pacific Exploration Co. of Vancouver has arranged for a test on the 70-acre track offsetting Columbia's No. 1. Crow's Nest Oils, Ltd., has taken an option on the Dally leases covering 9,997 acres on Sage Creek, Cabin Creek and Cauldrey Creek, giving the company a total of 12,694 acres in the Flathead Valley area.

### Alberta Production

Production from all Alberta fields in April is officially reported at 99,850 bbls. against 108,082 bbls. in March. Turner Valley naphtha decreased from 102,727 to 94,670 bbls.; Turner Valley light crude from 1,870 to 1,861 bbls.; Red Coulee light crude from 2,178 to 2,046 bbls., and Wainwright heavy crude from 1,307 to 803 bbls. There was in April a production of 470 bbls. of heavy crude from Devenish Petroleum's No. 3 in the Skiff Field.

### Ontario Fields

In the Dover Field, Kent County, Ontario, Central Pipe Line Co.'s No. 1, Joseph Antaya farm, Lot 1, Concession 4, Dover East Township, is below 3,175 feet, about 265 feet in the Trenton limestone, with natural flow about 600,000 feet a day. It will be deepened a little and shot. Prairie Oil & Gas Co.'s No. 4 has been located by E. P. Rowe on the Stephens farm, Lot 2, Front Concession, about 750 feet west of Prairie's No. 3 oil well. It is rigging. E. P. Rowe and associates have located a test in SW cor. W half Lot 2, Concession 4.

An important test has been spotted by F. H. Stover, George Rawlings and associates on the Charles Peltier farm in the Front Concession, immediately northwest of the intersection of the River Road and the Stirling Side Road. The location, close to the north end of the

(Continued on Page 88)


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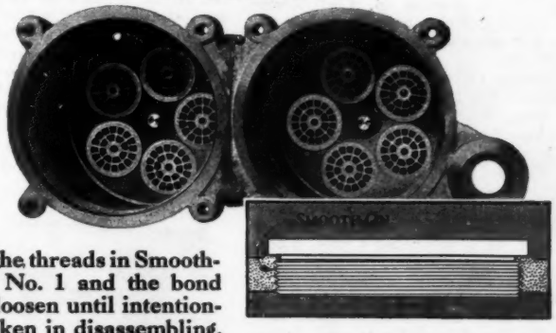

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# Southeast Ohio Has Best Producer of the Week; Two Small Producers in West Virginia Area

By STAFF CORRESPONDENT

PITTSBURGH, Pa., June 3.—Fifteen wells and four dry holes were completed in the lower eastern fields during the week. Eight were producers with an initial production of 139 bbls., which included one fair test, and seven were gas wells. Southeast Ohio continues to lead in new production.

### SOUTHEAST OHIO

The best producer was the test of McClay Brothers on the W. R. Bourne farm, SW Section 17, Fallsbury Township, Licking County, Ohio. It was drilled in the Clinton sand at a total depth of 2,927 feet and produced 20 bbls. the first day, natural, which increased to 120 bbls. a day with about 150,000 feet of gas, after shot. This well formerly was a producer in the Lime. In this county and NW Section 21, Mary Ann Township, Eugene Ridgeway completed a test on the A. J. Neibarger farm in the shallow Berea sand at a depth of 618 feet. It will make about 1½-bbl. pumper.

In Athens County, Ohio Fuel Gas Co. completed No. 5,971 on the Sunday Creek Coal Co. lease in SW Section 18, Dover Township. It was drilled in the Clinton sand, total depth 3,685 feet, and is a gas well gauging about 1,500,000 feet a day.

In Guernsey County, George Jewell and others drilled a test on the J. W. and Isaac L. Warehime farm in Section 9, Richland Township, in the Berea grit at 1,460 feet. It was formerly reported as having a showing of oil but has now been abandoned.

In Knox County, Sterling C. Brown and others completed a test on the W. O. Ross farm in Section 14, Clay Township. It is a 5-bbl. producer from the Berea grit, after shot, and the total depth was 684 feet.

In Medina County, E. R. Edson & Son Co. drilled No. 28 on the W. H. Wideman farm, Tract 1, Lot 3, Chatham Township, through the Berea grit to 517 feet. It was dry.

In Monroe County, Robinson & Greene completed a second test on the Katherine Baker farm, NW Section 16, Franklin Township, in the Lime at a depth of 1,240 feet. It is producing 4 bbls. a day after shot.

In Morgan County, Leland C. Burt and others completed a test on the F. H. Tuttle farm, 1 mile north of Dale, Lot 1097, Windsor Township. It was drilled in the Peeker sand at a depth of 445 feet and is a light pumper not more than 1 bbl. a day.

In Washington County, D. J. Peaker and others completed a test on the Muriel Swain farm in the north central part of Section 18, Aurelius Township, in the Macksburg 300-foot sand at 305 feet. It is good for 1 bbl. a day, natural. In Section 26, Ludlow Township, Wilber Oil Co. and others drilled a test on the Amanda Rinard farm through the grit to 1,735 feet and it is dry.

### SOUTHWEST PENNSYLVANIA

There was little change in Southwest Pennsylvania during the week, no wells being completed. Some new work is listed. In East Findley Township, Washington County, Natural Gas Co. of West Virginia has made a location on the Wright Ealy farm. In this township the Pitroi Fuel Co. has reached 1,284 feet on the Harvey F. Taylor farm.

In Amwell Township, Washington County, Raymond Orrill and others have started drilling No. 5 on the G. L. Walker farm, about 840 feet southwest of No. 2 which was a fair producer. F. K. Fawcett and others are drilling at 640 feet on the Tucker heirs farm. The Pittsburgh Coal was at 630 feet.

In Morris Township, Washington County, Carnegie Natural Gas Co. is down 2,959 feet in deepening No. 1 on the S. L. Harvey farm. Top of the Gordon sand was 2,947 feet with water showing in that formation and Gordon Stray sand. In North Franklin Township, F. D. Freeland and others have started a test on the T. F. Clark farm.

In Greene County, Lewis & Co. are drilling out the bailer at 1,100 feet on the Samuel Chess farm in Richhill Township. In Gilmore Township, Johnson and Eddy are down 2,890 feet in No. 2 on the W. L. B. Roberts farm.

H. E. Milliken and others are drilling at 2,470 feet in deepening No. 1 on the S. B. Smith farm in Jackson Township, Greene County. In Cumberland Township, Carnegie Natural Gas Co. is drilling at 2,845 feet deepening No. 2 on the Hester Stephenson farm.

Across the West Virginia state line, there are two new tests in Cass district, Monongalia County, both by Carnegie Natural Gas Co. The No. 1 on the Catherine R. Cooke farm is drilling at 374 feet and a location has been made on the C. H. Brand farm. In Center Township, Greene County, Carnegie Natural Gas Co. is ready with the tools to start drilling on the J. H. Orndoff farm.

### WEST VIRGINIA

There were two producers completed in West Virginia, both in Pleasants County. On Cow Creek in Jefferson district, G. A. Smith completed a test on the W. H. Naish farm in the Big Injun sand at a depth of 1,035 feet. It is showing for 3 bbls. a day and had been drilled through the Gordon sand. The lower sands were dry. On Limestone Run of Cow Creek, Martin and Kelley completed a test on the Pauline Hammett farm in the same district in the Second Salt sand at a depth of 1,073 feet. It is producing 5 bbls. a day, natural, and will be shot.

*W. G. Gish, Fort Worth, head of the land and geological departments in Texas and New Mexico for the Sinclair Prairie Oil Co.*

On Wills Creek in Big Sandy district, Kanawha County, South Penn Oil Co. started cleaning out No. 1 on the P. R. Rucker farm but did not shoot it as the well increased from 5 to 20 bbls. a day.

#### Gas Wells

In Cabell County, there were two completions. In McComas district, W. C. Kingery and others completed a test on the Augusta Beckett farm at a total depth of 1,345 feet as a gas well gauging over 1,000,000 feet a day. The Big Lime was at 1,113-1,285 feet and the Injun sand at 1,343-45 feet with the gas showing at 1,343-45 feet. In Guyandotte district, J. W. Ramsey & Sons deepened No. 1 on the W. E. Duncan farm with a fair showing of gas in the Brown shale. It was started at 2,681 feet with the shale extending from that depth to 2,965 feet and about 783,000 feet of gas a day at 2,861 feet.

In Cabell County, two fair gas wells reported did not include depths. Short logs follow. In the J. S. Pridemore and others' test on the H. S. and Bertha Nida farm in McComas district, the Big Lime was at 1,202-1,362 feet; Big Injun sand was at 1,440-80 feet; Berea sand at 1,977-87 feet; Brown shale, 2,400-3,111 feet with gas of over 300,000 feet a day showing at 3,065-90 feet. In the R. H. Adkins and others' No. 2 on the H. S. Fraley farm the Big Lime was at 1,306-1,466 feet; Big Injun sand at 1,522-35 feet with gas showing at 1,532-35 feet. The volume is nearly 900,000 feet a day.

In Clay County, H. C. Zogg completed No. 2 on the Thompson Coal Land Co. lease in Pleasant district in the Big Injun sand at a total depth of 1,619 feet. The Big Lime was at 1,518-52 feet and the Injun sand at 1,552-1,612 feet with 85,000 feet of gas tubed at 1,553-58 feet.

In Ritchie County, John Deem drilled on the Milton Hall farm in Clay district through the Squaw sand to a depth of 1,985 feet. It was dry.

In Roane County, Orchard Run Oil & Gas Co. completed No. 2 on the Leonard Brannon farm in Smithfield district as a fair gas well. The total depth was 1,942 feet with the Salt sand at 1,550-1,714 feet, Maxton sand at 1,855-75 feet, and Big Lime at 1,875-1,942 feet and about 2,000,000 feet a day showing at 1,928-42 feet. In this district, Jackson & Bowers completed a test on the J. A. and Amy Sarver heirs farm in the Injun sand at a depth of 1,854 feet. It is a light gas well, natural. In Spencer district, Henderson Oil Co. completed a test on the Vineyard and Vandevender farm in the Injun sand at 2,199 feet good for 79,000 feet a day, natural.

#### Deep Tests

No deep tests in West Virginia are expected in within a week or more. For purposes of correlation, the log of the Clyde Oil & Gas Co. test on the F. W. Shinn farm in Elk district, Kanawha County, reported dry in the Oriskany sand last week, is presented. The elevation of the mouth of the well is 627.81 feet. Soil, 0-15; coal, 15-20; slate, 20-65; 10-inch casing, 53 feet; sand, 65-120; slate, 120-200; sand, 200-240; slate, 240-260; sand, 260-280; slate, 280-320; 8¼-inch casing, 294 feet 8 inches; sand, 320-400; slate, 400-470; sand, 470-490; slate, 490-500; sand, 500-525; slate, 525-535; gas sand, 535-565; slate, 565-567; salt sand, 567-1,165; water, 574 and again at 690 with the hole full; slate, 1,165-80; red rock, 1,180-85; slate, 1,185-94; Maxton hard, 1,194-1,250; Little Lime, 1,250-83; slate, 1,283-94; lime shells, 1,294-1,306; Pencil Cave, 1,306-11; Big Lime, 1,311-1,480; Injun sand, 1,480-1,520; slate, 1,520-37; Black Lime, 1,537-1,619; 6⅝-inch casing, 1,540 feet; slate shale, 1,619-1,907; brown shale, 1,907-14; Berea, 1,914-18; slate and shells, 1,918-3,102; brown shale, 3,102-32; slate and shells, 3,132-3,415; brown shale, 3,415-40; slate and shells, 3,440-3,575; shale, 3,575-3,607; slate and shells, 3,607-3,950; brown shale, 3,950-58; Big White slate, 3,958-4,269; brown shale, 4,269-90; white slate, 4,290-4,350; brown shale, 4,350-4,550; slate and shells, 4,550-90; brown shale, 4,590-4,628; slate and shells, 4,628-90; black shale, 4,690-4,722; Corniferous lime, 4,722-4,831 feet 6 inches; 5¾-inch casing, 4,730 feet; Oriskany sand, 4,831 feet 6 inches to 4,843 feet 6 inches. Total depth, 4,849 feet and dry in all formations.

In Elk district, Kanawha County, Benedum & Trees have reached 4,360 feet on the Mary C. Wingfield farm. Yoak Oil & Gas Co. is down 4,335 feet on the W. T. and J. H. Coshorn farm. Columbian Carbon Co. is drilling at 1,035 feet on the G. and D. Copenhaver farm. In Malden district this company is down 582 feet on the W. D. Lewis farm on Coal Fork branch of Campbells Creek about a half mile north of Mill Creek. Godfrey L. Cabot, Inc., has reached 1,100 feet on the Plus R. Levi farm on U. S. Route 60, a third of a mile north of the town of Levi.

In Loudin district, this operator is drilling at 2,865 feet on the Edgewood Realty Co. tract. In Jefferson district, Benedum & Trees are down 4,300 feet on the Joseph Hill farm.

#### Other Drilling

In Boone County, Pond Fork Oil & Gas Co. is building a rig for No. 21 on the Cole & Crane lease in Washington district. Owens Illinois Glass Co. is down 1,834 feet on the H. C. Vandelinde farm. In Sherman district, this company has reached 1,705 feet on the Peytonia Coal Land Co. lease.

In Calhoun County, Southeastern Gas Co. is drilling on the Amos Smith farm in Lee district and has reached 1,000 feet. Everett Starcher is down 950 feet on the C. C. Starcher farm. In Sherman district, C. B. Lewis and others are drilling at 1,980 feet on the M. J. Kight farm, No. 2. In Washington district, Earl Knotts has the material on the H. H. Bennington farm.

In Kanawha County, Virginian Gasoline & Oil Corp. has made a location for No. 18 on the Cloe J. Copenhaver farm in Elk district on Blue Creek. In Big Sandy district, J. B. Weir is down 1,350 feet in No. 109 on the Falling Rock Cannel Coal Co. lease.

In Lincoln County, Kanawha Gas & Utilities Co. is drilling at 700 feet on the R. R. Sloan farm in Sheridan district. In Logan district, Logan County, Boone County Coal Co. is moving in rig for No. 3 on its own property. Nos. 1 and 2 were in Washington district, Boone County, and both gas wells.

In Marshall County, on Grave Creek in Cameron district, Cameron Heat & Light Co. has started drilling No. 2 on the W. R. Hughes farm. In Marion County, Owens Illinois Glass Co. is drilling at 1,600 feet on the A. T. Heck farm in Paw Paw district.

In Ritchie County, W. A. Bickerstaff has rigged up on the Lakin Prichard farm in Union district. In Murphy district, W. H. Bickle is drilling at 1,095 feet No. 5 on the U. S. Fluharty farm

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# More Than Two Hundred Strings of Tools Running in Michigan Following Crystal Development

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., June 3.—Record drilling activity throughout Michigan, with more than 200 strings of tools running and excitement still high in the new Crystal Township, Montcalm County, field last week, resulted in a greater record of new production both of oil and gas than in several months.

Four new producers ranging from 100 to 3,500 bbls. a day initial and a dry hole indicated a trend to the west and northwest in the new Central Michigan Field and curtailed interest to the east and immediate north of the discovery well. No tests as yet have been completed south of the discovery, making it yet impossible to estimate the extent or direction of the pool.

A new Michigan stray gas test which blew in with an open flow capacity of 9,500,000 feet a day caught fire and resulted in the death of two men and the injury of eight others, was another of the thrilling developments of the week.

Several other small oil wells, one in Porter Township, Midland County, and four in Ogemaw County and another smaller gasser in Broomfield Township, Isabella County, comprised the remainder of the successful completions, totaling nine oil wells with an aggregate daily potential of about 7,700 bbls. of oil daily and two gassers with a combined open flow of 11,500,000 feet a day. Two dry holes, the one in Crystal Township and the other in Porter, also were listed.

In addition to the completions, an interesting new show of Dundee oil was encountered in Cherry Valley Township, Lake County, the first indication of a possible new western Michigan Field in several years.

### Crystal-Montcalm

Largest of the four new producers in Crystal Township was brought in by J. W. Leonard, Jr., and others, developers of the discovery, No. 1 Otto Durbin, March 28, whose No. 1 West, NE NE NW Section 11-10n-5w, was gauged at 128.76 bbls. hourly on a third-hour test, or about 3,500 bbls. a day. Dundee limestone was topped at 3,174 feet and the well completed as a direct west offset to the discovery at 3,200 feet.

First pay sands were struck at 3,192 feet and the well actually produced 712 bbls. during the first four hours, or about 180 bbls. an hour. The official gauge was taken several days after completion.

The second largest well was drilled in several days later by the McClanahan Oil Co. about two locations west of the Leonard-West well as the No. 1 Harry and Geneva Flint, NW NW NW Section 11, Crystal. Topping the Dundee at 3,177 feet and drilling 16 feet in for a total depth of 3,193 feet, the Flint made an initial flow of 137 bbls. in 45 minutes and was estimated good for 3,000 bbls. a day.

The Daily Crude Oil Co.'s No. 1 John Tow, SE NW SW Section 2, same township, about half a mile northwest of the discovery, topped the Dundee at 3,186 feet, the pay at 3,181 feet and flowed 19 bbls. an hour.

Deepened to 3,196 feet it flowed 650 bbls. in 24 hours, while it made 45 bbls. in the first hour after drilling to a total depth of 3,198 feet. It is considered of importance as the first test completed off "Wall Street," the country road on which all of the other completions border.

Even Taggart Brothers, Inc.'s No. 1 Fred Smith, SW SW SW Section 1, same township, located about half a mile due east of the discovery and drilled into bottom water as the first dry hole in the area is on the north side of the same road.

Dundee limestone was topped at 3,183 feet after casing at 3,177 feet with a hole full of water at 3,222 feet. Although it made a show of about 3,000,000 feet of gas in the shallow Michigan Stray sands it will be plugged and abandoned, it was announced. The operators also are planning to abandon a second test on the lease located NE SW SW Section 1, after drilling to 960 feet with the rotary tools used on the first well to a depth of about 2,800 feet.

Another disappointment which has not yet been abandoned, however, and may yet make a good producer is the Eastern Gulf Oil Co.'s No. 1 George W. Barger, SW SW SE Section 2, Crystal, which came in originally the week before with an initial flow estimated at 4,800 to 5,000 bbls. a day based on 55 bbls. in the first 15 minutes, but later went to water.

Dundee was topped at 3,178 feet in the Barger, direct north offset to the Leonard-Durbin discovery, and the first oil encountered at 3,184 feet with a flow of gas estimated at 5,000,000 feet. It later made 50 per cent water at a total of 3,187 feet and about 32 bbls. of oil. This later was increased to about 100 bbls. and may be further boosted by deeper drilling, as it had not yet been drilled as deep as the discovery.

Four or five other tests in or near Crystal Township were slated for completion this week and were being watched for further indications of the extent and direction of the pool. They include Gordon Oil Co.'s No. 1 Fred Smith, SE SW SW Section 1, Crystal, an east offset to the Taggart-Smith duster; Mammoth Petroleum Corp.'s No. 1 Fred Graham, SW SE SW Section 31-11n-4w, Sumner Township, Gratiot County, located about a mile and a half northeast of the Durbin, and J. E. Evans, Trustee's No. 1 Anasthasia Pancak, NW NW NW Section 18-10n-4w, New Haven Township, also Gratiot County, about a mile and a half southeast of the Durbin. Fred Turner and others' No. 1 Jerry McConkey, NW SE SW Section 10, Crystal Township, also was nearing a depth of 3,000 feet already exceeded by the other three tests.

A second heavy flow of gas was struck in the Crystal Oil Co.'s No. 1 Ben Shaver, NW NW NE Section 4, New Haven Township, in the Michigan Stray sands but was cemented off and drilling continued.

### Midland County

Pure Oil Co.'s No. 3 Frank Howland, SW NW NW Section 23-13n-1w, Porter Township, Midland County, struck a flow of about 60 bbls. a day in the upper Traverse formation but continued drilling to the Dundee while producing the Traverse crude.

Great Central Oil & Gas Co.'s No. 1 Emmett Scott in Section 8-14n-2w, Greendale Township, Midland County, made about 50 bbls. a day after being deepened to 3,582 feet. Originally drilled in April to 3,572 feet it came in with a flush of 75 bbls. but rapidly declined.

Theodore Oil Co.'s No. 7 Campbell, in Section 7, Porter Township, after testing for five weeks in an attempt to make commercial production, finally was plugged and abandoned as a dry hole.

There are still about 25 undrilled locations in Porter Township, the largest producing area in Michigan.

### Isabella County

Morris Oil & Gas Co.'s No. 1 Marthey, in Section 19-15n-3w, Denver Township, Isabella County, was increased to about 100 bbls. a day by deepening in the Dundee. It was originally drilled by the Michigan Gas & Oil Co.

W. J. Bernier's No. 1 William Nicholson, C NE NW Section 14-14n-6w, Broomfield Township, Isabella County, was completed as a new 2,000,000-foot gasser in the Michigan Stray sands at 1,349 feet deep, leaving only one other test drilling in this field by the same operator on the William Robinson lease in Section 1.

### Mecosta County

One of the largest gassers recently completed in the Michigan Stray sands was the Gordon Oil Co.'s No. 1 Allen Williams, C SW SE Section 33-13n-7w, Millbrook Township, which had a gauged flow of 9,500,000 feet a day 11 feet in the formation at 1,253 feet before it caught fire and burned for several days. It had not yet been placed under control Saturday.

### Ogemaw County

Four small Dundee producers ranging from 40 to 95 bbls. a day were completed after acid treatment in West Branch and Ogemaw Township, Ogemaw County, last week.

Largest of three in the West Branch Pool was the Weber Oil Co.'s No. 1 Reuben Horsell, NE SW SW Section 28-22n-2e, completed at a total depth of

(Continued on Page 88)

# New York and Pennsylvania Gas Fields; Potter County Production Extended

COUDERSPORT, Pa., June 1.—While new production in the week ending May 31, in the north central Pennsylvania and adjacent New York gas fields did not approach that of the preceding period, a completion in Potter County serves to extend the productive area. This was Potter Development Co.'s No. 1 McAllister, Harrison Township, which was gauged for 3,400,000 feet, rock pressure at 2,115 pounds. The top of the sand was reached at 5,103 feet and the well was completed at 5,115 feet. Last week New York State Natural Gas Co. completed its test on the Margaret E. Sanford farm, Genesee Township, Potter County, for 21,500,000 feet at a depth of 5,131 feet.

### Pennsylvania Operations

Sylvania Natural Gas Corp. reached the top of the Oriskany sand at 5,261 feet at its No. 1 Z. L. James, Allegany Township, Potter County. The No. 2 Z. L. James, near this test, was completed several weeks ago as a heavy gasser. P. H. Fitzstevens is down 4,350 feet on the M. Fitzstevens farm, Genesee Township, same county. East Penn Development Co. is drilling at 2,378 feet in the Clarence Cooley farm, Lawrence Township, Tioga County, and is spudding on the Ray French farm, Clymer Township, same county.

Updegraph and others are drilling at 2,625 feet on the Theodore Cobb farm, Genesee Township, Potter County. Cowanesque Gas Co. is drilling at 2,280 feet on the E. A. Furman farm, Allegany Township, same county. Hanley and Bird are rigging up on the George Burd farm, same township and county. Williamsport Natural Gas Co. is drilling at 260 feet on the Hile farm, Genesee Township, same county. Sylvania Natural Gas Corp. is drilling at 820 feet on the Merle A. Hill farm, same township. Penn United is drilling at 2,565 feet on the Charles Morris farm, same township. Stocum and others are rigging up on the L. Thompson farm, same township. Sylvania is drilling at 350 feet on its No. 3 Z. L. James, Allegany Township, same county. Wyoga Oil & Gas Co. is rigging up for its No. 3 Tassell, Hebron Township, same county. Godfrey L. Cabot is moving in on the A. G. Lyman farm, Ulysses Township, same county, and on the Robert R. Lewis farm, Allegany Township, same county. United Producers has staked a location on the K. Currier farm, and Penn-York Natural Gas Co. one on the William Cobb farm, both in Allegany Township, Potter County. The deep test in the lower Pennsylvania Field, South Union Township, Fayette County, drilled by William Snee and others on the Summit Hotel property, is down 3,275 feet.

### New York Operations

No completions were reported in the New York State fields. In the preceding week Empire Gas & Fuel Co. completed its test on the M. Costella farm, Willing Township, Allegany County, for 7,500,000 feet at a depth of 4,744 feet. Production is from 2 feet of the Oriskany. Oneida Development Co. completed a 250,000-foot producer in the shallow sand on the J. Griffin farm, York Township, Oneida County. Total depth was 1,400 feet and initial rock pressure 590 pounds.

### Wells Drilling

Three wells were spudding, three shut down, and four drilling in the New York fields in the week ending May 31. Southwestern Development Co. is spudding in on the T. Moran farm, Alma Township, Allegany County. Godfrey L. Cabot is spudding on the B. Barringer farm, Belfast Township, same county. Cunningham Natural Gas Co. is spudding on the Colligan farm, Alma Township, same county.

Godfrey L. Cabot is drilling at 1,264 feet on the Roberts farm, York Township, Oneida County. Rome Syndicate is shut down at 500 feet on the Meaker farm, same township. Godfrey L. Cabot is drilling at 409 feet on the Comins farm, same township. Benholm Trust has staked a location on the H. Vandewakler farm, same township. Property Shares, Inc. is drilling at 1,074 feet on the E. Williams farm, Florence Township, same county. Wittmer Oil & Gas Co. is drilling at 1,140 feet on the Bert Bennett farm, Howard Township, Steuben County. Wyoming Natural Gas Co. is shut down at 1,783 feet on the C. H. Caulling farm, York Township, Oneida County. Trumbull and others are shut down at 1,000 feet on the W. B. Lasher farm, Throop Township, Cayuga County. Belmont Quadrangle Development Co. is moving in on the Van Copen and Whitman farm, Willing Township, Allegany County.

# Big Blocks of Acreage Being Taken in Western Kansas; State Maintains Its High Production

By JAMES McINTYRE

The Memorial holiday set back operations in Kansas, and completions and new work dropped off à little in the past week. Outside of Russell County no very large wells were completed.

The blocking of acreage in western Kansas continues; H. H. and Dan Patton of Wichita are clearing titles on 4,500 acres in Townships 18-21w and 19-21w, Ness County. It is an old Barnsdall block on which a 200-bbl. initial producer was drilled in Section 35-18-21w. The well went to water quickly. The new owners are required to start a well by July 7, and will locate it about a quarter of a mile west of the old Barnsdall well. D. R. Lauck of Wichita has purchased a 12,000-acre block in Kingman County in Townships 27-8w and 28-8w. F. A. Gillespie & Son of Tulsa bought a block in Township 15-17w in southeastern Ellis County and Boyle & Crossman have taken a block of 10,000 acres in Townships 17-19w and 18-19w, Rush County, and will start a test this month. H. V. Ellwell has more than 70,000 acres blocked up in Norton and Decatur Counties in the northwestern part of the State and a number of operators are negotiating for a purchase of portions of it.

Russell County is the most active region in the State and in the past week the completions in the various pools of that county included a 1,385-bbl. well and another good for about 2,300 bbls.

Production remains above 150,000 bbls. a day, the past week's average having been 153,225 bbls. per day.

### Kansas Production

Estimated daily average production of Kansas for the week ended June 1 and for the preceding week follows:

| | Barrels | |
|---|---|---|
| | June 1 | May 25 |
| Burrton | 26,375 | 26,800 |
| Ritz-Canton | 7,450 | 7,250 |
| Hollow | 4,100 | 4,350 |
| Voshell | 4,850 | 4,450 |
| Johnson | 1,320 | 1,340 |
| Nikkell | 4,750 | 4,700 |
| Sedgwick County | 9,950 | 9,825 |
| Ellsworth County | 5,500 | 5,450 |
| Barton County | 1,850 | 1,870 |
| Rice County: | | |
| Chase Pool | 16,200 | 16,404 |
| Remainder | 7,400 | 7,312 |
| Ellis County | 225 | 224 |
| Kingman County | 850 | 840 |
| Stafford County | 2,640 | 2,672 |
| Russell County | 12,950 | 12,425 |
| Greenwood County | 11,100 | 11,100 |
| Butler County | 17,900 | 18,000 |
| Other pools | 17,815 | 17,764 |
| Total Kansas | 153,225 | 152,900 |

### Russell County

J. A. Aylward's No. 1 Poleyn, SE cor. Section 31-12-15w, in the Fairport Pool, Russell County, Oswald lime at 3,060 feet, show of oil at 3,087-92 feet, hole full of water at 3,150-60 feet; Granite wash at 3,311 feet and total depth 3,400 feet, dry and abandoned.

Gypsy Oil Co.'s No. 1 Neidenthal, SE cor. Section 14-14-15w, Neidenthal Pool, Siliceous lime at 3,266-71 feet, pumped 378 bbls. of oil in 24 hours; acidized and pumped a potential production of 1,385 bbls. of oil and 88 bbls. of water; completed.

Skelly Oil Co. made a location for No. 1 South Opdyke, NW cor. Section 32-14-13w, and for No. 1 Weeks, NE NE SW Section 34-15-13w.

Central Petroleum Co.'s No. 1 Ginther, 410 feet from north and 410 feet from east lines of NW ¼ Section 30-12-15w, was acidized in Oswald lime at 3,010-22 feet and swabbed 496 bbls. in 24 hours.

Hartman & Blair's No. 1 Cook, NE cor. Section 26-12-15w, had Siliceous lime at 3,317-29 feet, total depth, and showed 2 bbls. per hour.

Empire Oil & Refining Co.'s No. 2 Ehrlich, SE NE SE Section 28-13-14w, was acidized in Siliceous lime at 3,272-79 feet, total depth, and pumped 1,820 bbls. of oil in 20 hours.

British American Oil Co.'s No. 1 Boxberger, NE cor. Section 33-13-14w, was acidized in Siliceous lime at 3,280-87 feet. The hole had filled 2,000 feet with oil before the acid treatment, but the well had not been tested for production.

Skelly Oil Co.'s No. 1 Opdyke, SW cor. Section 29-14-13w, pumped 1,094 bbls. in 18 hours. It had Oswald lime at 2,861 feet with showings at several depths to the bottom, 3,135½ feet. It had not been acidized.

Gypsy Oil Co.'s No. 1 Kultgen, NE SE NW Section 16-16-12w, had Oswald lime at 3,065 feet, and showings of oil at 3,240-50 feet, 3,283-85 feet, 3,342-49 feet, total depth 3,353 feet. It swabbed 196 bbls. of oil in six and one-half hours.

### Ellsworth County

Empire Oil & Refining Co.'s No. 3 Rolfs, NE SE NE Section 14-17-9w, Rolfs, Ellsworth County, found Siliceous lime at 3,186-93 feet, total depth, produced a potential of 1,336 bbls. of oil and was completed.

Smith & Ash and Gypsy Oil Co.'s No. 2 Shanyo, SE SW SW Section 24-17-10w, is a location; Rosenthal, Beardmore, Hinkle and others' No. 1 Becker, NW NW SW Section 25-17-10w, moving in material; Atlantic Oil Producing Co.'s No. 7 Rolfs, NW NW SE Section 14-17-9w, location; Phillips Petroleum Co.'s No. 1 Melchert, NE SW NE Section 23-17-9w, cellar; Slick, Pryor & Lockhart and others' No. 1 Moran "A," SW SW NW Section 4-18-10w, location.

Stanolind Oil & Gas Co. and Gypsy Oil Co.'s No. 4 Frevert, C NE ¼ Section 21-16-10w, swabbed 22 bbls. per hour from Siliceous lime at 3,249-55 feet.

C. Davis, Winkler & Koch's No. 1 Melchert, NW NE NE Section 23-17-9w, pumped 567 bbls. in eight hours from Siliceous lime at 3,189-94 feet, total depth.

### Rice County

Shell Petroleum Corp. and others' No. 1 4 Ploog, 350 feet south and 440 feet west of C Section 33-18-9w, Rice County, had Siliceous lime at 3,214-30 feet, total depth, was completed after it had made a potential of 1,249 bbls.

Empire Oil & Refining Co. completed No. 2 Tournear, SW SE NE Section 29-19-9w, Orth Pool, in Siliceous lime at 3,201-20 feet, total depth. It produced 1,376 bbls. in 24 hours on its potential test.

Empire Oil & Refining Co.'s No. 9 Heckel, SW NE SW Section 18-20-9w, produced 272 bbls. initially from Siliceous lime at 3,327-33 feet, total depth.

Gypsy Oil Co.'s No. 2 E. Malone, NW SW NE Section 18-20-9w, was acidized in Siliceous lime at 3,330-40 feet, total depth, and produced 361 bbls. of oil and 10 bbls. of water in 24 hours. It was completed.

Slick, Pryor & Lockhart and others made a location for No. 1 Moran A, SW SW NW Section 4-18-10w, and for No. 1 Roesler A, NE NE SE Section 5-18-10w. Keith and others had cellar dug for No. 4 Volkland, SE NW SE Section 20-19-9w. Deitrich and others have made location for a wildcat test, No. 1 Conner, C NE NE Section 28-19-7w. Hipple & Rogers have rig up for No. 6 Rainet, C E half SW SE Section 3-21-6w, in the Matheson Pool. Detrick and others made location for a wildcat test, No. 1 Monroe, C NE NE Section 9-20-7w.

Vickers and others' No. 1 Gouldner, a wildcat in SE NE NW Section 16-18-9w, was shut down at 3,020 feet with an 8,270,000-foot gas production. The gas started at 2,879 feet, the top of the Kansas City lime, and increased as the well was deepened. The owners intended to kill the gas and go on with the test.

Marathon Oil Co.'s No. 2 Grove, NE NE NW Section 29-19-9w, had Siliceous lime at 3,206-75 feet, total depth. It was acidized and made a potential production of 262 bbls., but the well will be drilled deeper.

Shell Petroleum Corp.'s No. 4 Tournear, NW NE SE Section 29-19-9w, acidized in Siliceous lime at 3,222-41 feet, total depth, pumped 516 bbls. in 23 hours, but will be drilled deeper. Same company's No. 5 Tournear, NW SW SE Section 29-19-9w, had Siliceous lime at 3,228-74 feet, and was shot with 20 quarts but swabbed only 1 bbl. of oil and 13 bbls. of water.

Empire Oil & Refining Co.'s No. 1 Malone, SW SE NW Section 19-20-9w, was a hole full of water from Siliceous lime at 3,376-84 feet, but was drilled to 3,631 feet and shut down.

### Barton County

In the Steckel Pool, Barton County, C. B. Davis and Gypsy Oil Co.'s No. 1 Steckel, SW SE SE Section 1-20-11w, had Siliceous lime at 3,267-85 feet, total depth, and made a 48-hour test producing 2,594 bbls. in the two days. It had previously made a 24-hour test and produced 1,246 bbls. It was not acidized.

Stanolind Oil & Gas Co. and others' No. 6 Allen produced 667 bbls. on its

## Wildcat Operations in Kansas

Week Ending June 1

(Descriptions are East unless marked otherwise)

**BARBER COUNTY**

Sam Jarvis et al's No. 1 Morrisse, C SE NE Sec. 22-30-10w.
Rig.

Southern Drlg. Co. et al's No. 1 Davis, 330 ft. from W and 330 ft. from S lines of NE Sec. 13-34-15w.
Drlg. 2,550 ft.

L. H. Wentz' No. 1 Skinner, SE NW NW NE Sec. 29-31-14w.
Drlg. 3,018 ft.

**BARTON COUNTY**

Lario O. & G. Co. and McCoy's No. 1 Dolechek, NE NW NE Sec. 13-16-12w.
Drlg. 540 ft.

Lario O. & G. Co. et al's No. 1 Nuss, NW SW SW Sec. 11-16-14w.
Drlg. 3,125 ft.

McMorrow & Spencer's No. 1 Hagen, NE cor. Sec. 33-20-11w.
U.R. 5-in. to 2,512 ft.

C. L. Price et al's No. 1 Ehrlich, NW SE Sec. 10-16-12w.
C.O. 838 ft.

Pryor & Lockhart's No. 1 Herrington, NE NW Sec. 6-16-12w.
Drlg. 1,110 ft.

Suppes & Witt's No. 1 Hayes, SW cor. Sec. 7-16-15w.
Drlg. 660 ft.

Torry-Peaster et al's No. 1 Feist, NE SE Sec. 29-18-11w.
Moving in material.

Wolf Creek Oil Co.'s No. 1 Kraft, SW cor. Sec. 26-16-11w.
Siliceous lime 3,370 ft.; 300 ft. of oil in hole at 3,396-97 ft.; S.W. at 3,400-03 ft.

**BUTLER COUNTY**

Hay & Cameron's No. 1 Johnson, NW NW SE Sec. 16-26-6.
Drlg. 1,560 ft.

Sanford et al's No. 1 Cron, SE SE SE Sec. 1-28-4.
S.D. 2,281 ft.

Sinclair Prairie Oil Co.'s No. 1 Moore, SE SW SE Sec. 36-24-3.
Location.

Ward McGinnis' No. 1 Jackson, SW NE Sec. 26-25-4.
Drlg. 1,755 ft.

Western Kansas O. & R. Co.'s No. 1 King & Marshall, NW NW SW Sec. 11-28-6.
Spudded and S.D.

**CHAUTAUQUA COUNTY**

Central Oil Co.'s No. 1 Crews, NE NE SW Sec. 8-32-12.
Drlg. 1,600 ft.

**CLAY COUNTY**

Seidel Bros.' No. 1 Younken, C S½ SE NW Sec. 21-9-4.
Mississippi 1,772-81 ft.; est. 25 bbls. oil and some wtr.; later 5 bbls. oil and 10 bbls. of wtr.; acidized; C.O.

**COWLEY COUNTY**

Baden, Johnson Roth & Faurot's No. 1 David, NE SW Sec. 35-30-4.
Spudding.

Lloyd, Frost & Study's No. 1 Weathered, SW SE SE Sec. 28-31-3.
Drlg. 3,200 ft.

**ELLIS COUNTY**

Tom Palmer and Storm King Oil Co.'s No. 1 Ruder, SE NE NW Sec. 17-15-18w.
Drlg. 1,134 ft.

Stanolind O. & G. Co.'s No. 1 Penney-Wann, NW SW SE Sec. 12-15-20w.
T.D. 55 ft.; waiting for cmt.

**ELLSWORTH COUNTY**

Lario O. & G. Co.'s No. 1 State, SW SW SW Sec. 29-15s-8w.
Drlg. 3,550 ft.

Lario O. & G. Co. et al's No. 1 Central National Bank, SE NW Sec. 23-15-8w.
Drlg. 2,340 ft.

Western Exploration Co.'s No. 1 Wilkins, NW SW NW Sec. 9-17-9w.
Running 10-in. pipe to 1,805 ft.

**GRAHAM COUNTY**

Helmerich & Payne et al's No. 1 Stites, C SW SW Sec. 8-10-22w.
Location.

Ramsey Pet. Co. et al's No. 1 Darkes, SW SW NW Sec. 5-17-20w.
Location.

Detrick et al's No. 1 Conner, C NE NE Sec. 28-19-7w.
Location.

Detrick et al's No. 1 Monroe, C NE NE Sec. 9-20-7w.
Location.

Griffin & Bell's No. 1 Silger, NE SE SE Sec. 25-30-10.
Lime at 1,314-20 ft.; pumped 36 bbls. of oil in 24 hrs.

Hicks et al's No. 1 Lewis, SW SE SE Sec. 35-31-10.
Drlg. 500 ft.

Wakefield's No. 1 Tharp, SE SE NE Sec. 10-32-3.
Location.

**GREENWOOD COUNTY**

Foster & Schultz's No. 1 Ferguson, C S½ NE SW Sec. 12-26-13.
Drlg. 1,340 ft.

**HARPER COUNTY**

Kessler, Thier et al's No. 1 Wolfje, SW SW SE Sec. 17-33-6w.
Moving in material.

**HARVEY COUNTY**

Cameron, Derby Oil Co. and Trees' No. 1 Brainard, SW SE NW Sec. 19-24-2.
Drlg. 2,695 ft.

Goering Bros.' No. 1 Brainard, NE SW Sec. 3-23-2w.
Fishing 1,220 ft.

Hartman & Blair et al's No. 1 Redinger, NW cor. Sec. 15-24-3w.
Cellar.

D. R. Lauck et al's No. 1 Baller, SW cor. Sec. 29-24-1.
Drlg. 3,013 ft.

L. W. Prunty et al's No. 1 Davis, NE cor. Sec. 6-23-1w.
Chat 2,922 ft.; drlg. 2,928 ft.

Twin Drlg. Co. et al's (O. J. Connell), No. 1 Ruth, SW cor. Sec. 16-22-2w.
U.R. 6-in. pipe to 3,275 ft.

Winkler Koch et al's No. 1 Mueller, SE SW NW Sec. 15-23-2w.
Drlg. 1,045 ft.

**KINGMAN COUNTY**

Derby et al's No. 1 Bartholomew, SW SW NW Sec. 8-27-4w.
S.D. 20 ft.

Gypsy Oil Co.'s No. 1 Tonn, SW NW SE Sec. 16-25-4w.
Drlg. 1,250 ft.

Kingman Oil Co.'s No. 1 Wetherall, NE NE SW Sec. 20-28-10w.
Drlg. 585 ft.

**McPHERSON COUNTY**

Anderson & Kerr et al's No. 1 Lackey, NE SE NW Sec. 13-21-4w.
Moving in material.

Brosius et al's No. 1 Hanson, NE NE SW Sec. 15-17-2w.
T.D. 1,108 ft.; S.D.

Carey & Miller's No. 1 Husband, SE SE NW Sec. 6-19-3w.
Moving in material.

Palmer Oil Corp.'s No. 1 Swenson, NE NE SW Sec. 11-18-3w.
Viola 3,645 ft.; H.F.W.; S.D.

(Continued on Page 88)

initial test for potential and was completed. Siliceous lime lies at 3,564-73 feet, total depth.

Downing and others' No. 1 Eberhart, SE cor. Section 14-19-11w, found Siliceous lime at 3,311-60 feet, total depth. Acidized, it had 184 bbls. in 24 hours, with 4½ bbls. the last hour. It was not completed.

### Reno County

In the Burrton Pool, Reno County, Sinclair Prairie Oil Co.'s No. 6 Base, producing from Hunton lime at 3,593-93½ feet, total depth, pumped 164 bbls. of oil and 100 bbls. of water in its potential test and was completed.

Shell Petroleum Corp. made location for No. 1 Dunton, C NE NE Section 16-24-4w, Burrton Pool.

Operators in the Burrton Pool have not been experiencing the good luck they enjoyed earlier in the year with wells drilled to Hunton lime and Siliceous lime. Some of these new wells have been showing a lot of water and have been plugged back to Chat in the hope of making oil wells of them. Amerada Petroleum Corp.'s No. 4 Wilson, NE NW SW Section 23-23-4w, was a hole full of water in Hunton lime at 3,607-21 feet and was plugged back to Chat but not yet tested. Olson Oil Co. and Shell Petroleum Corp.'s No. 8 Blake, NW NW SE Section 23-23-4w, swabbed 15 bbls. of oil and lots of water from Hunton lime at 3,601-09 feet. It was plugged back and pipe perforated at 3,340-70 feet and a 10,000,000-foot gas production with a show of oil resulted. McBride, Inc., and Derby Oil Co.'s No. 1 Grandon, NW NE NE Section 3-24-4w, was a hole full of water in Siliceous lime at 3,811-17 feet. It was plugged back to 3,416 feet and the casing perforated. Oil rose 300 feet in the hole, but it has not been tested for production.

Dickey Oil & Refining Co. and Indian Territory Illuminating Oil Co.'s No. 3 J. Baughman, was acidized in Chat at 3,253-3,365 feet and flowed 646 bbls. in 24 hours. It was not completed.

### McPherson County

In the Ritz-Canton Pool, McPherson County, Shell Petroleum Corp.'s No. 9 Decker, SW SW NE Section 11-19-2w, had Viola lime at 3,369-76 feet, total depth, and made a potential production of 345 bbls. with 25 bbls. of water. It was completed. Same company also completed No. 4 Hull, NE NE SW Section 11-19-2w, in Viola lime at 3,364-68 feet, total depth, after it had produced 532 bbls. of oil and 60 bbls. of water in a potential test.

Shell Petroleum Corp. was moving in material for No. 10 Decker, 1,317 feet from north and 330 feet from west lines of NE ¼ Section 11-19-2w, in the Ritz-Canton Pool, and was moving in material for No. 4 Fleming, C S half S half NW ¼ Section 11-19-2w. Shell Petroleum Corp. made location for No. 4 Koehn, SE SW NE Section 16-21-3w, Voshell Pool.

Palmer Oil Corp.'s wildcat test, No. 1 Swenson, NE NE SE Section 11-18-3w, was a hole full of water at a total depth of 3,645 feet, the top of Viola lime. It found nothing but water in all the formations on the way down. The test was shut down.

Shell Petroleum Corp.'s No. 1 Wenger, NE cor. Section 2-20-1w, a wildcat, was shut down for pipe line. It pumped 80 bbls. of oil and 210 bbls. of water from Viola lime at 3,356-59 feet, total depth 3,364 feet. It had been acidized.

### Graham County

Graham County is to have a test for oil. Helmerich & Payne and others have rig up for No. 1 Stites, C SW SW Section 8-10-22w, about 11 miles southeasterly from Hill City.

### Rush County

Ramsey Petroleum Corp. and others have rig up for No. 1 Darkes, SW SW NW Section 5-17-20w, in western Rush County, a wildcat.

### Harvey County

Shell Petroleum Corp. made location for No. 8 Voth, NW cor. Section 4-22-3w, in the Hollow Pool, Harvey County.

Phillips Petroleum Co.'s No. 1 Ewy, NW SW NW Section 24-22-2w, was a hole full of water from Siliceous lime at 3,545-58 feet, total depth.

### Cowley County

Location has been made for Wakefield's No. 1 Tharp, SE SE NE Section 10-32-3, a wildcat in Cowley County, and Alma Petroleum Co. had rig up for No. 1-A Wickary, NE NW SE Section 7-35-3.

### Harper County

Kessler & Thier and others were moving in material to start a wildcat test in Harper County, No. 1 Wolfje, SW SW NE Section 17-33-6w.

### Butler County

Sitrin Brothers' No. 1-A Anderson, C E half SE SE Section 9-27-4, Butler County, is a 15-bbl. completion in Kansas City lime at 1,950-2,005 feet.

### Sumner County

Wakefield and others abandoned the location for No. 1 Newton, SE cor. Section 21-30-2e, Sumner County.

Champlin Refining Co. is deepening No. 2-B Latta, SE SW NW Section 9-30-2w, from 3,057 feet, old total depth, and at 3,168-71 feet found a pay. It was given a 2,000-gallon acid treatment and pumped 179 bbls. of oil and 45 bbls. of water.

### Greenwood, Coffey and Woodson Counties

In the Winterscheid Pool in Coffey and Woodson Counties, A. A. Hinze and others' No. 3 Vannocker, 760 feet from north and 1,120 feet from west lines of NE ¼ Section 12-23, made a 15-bbl. completion in Mississippi lime at 1,503-50 feet, total depth. In the same pool, Theta Oil Co.'s No. 6 McClaskey, C E half SE NE Section 31-23-14, was a 22-bbl. completion from Mississippi lime at 1,659-87 feet, with pay at 1,680-86 feet.

Foster & Schultz' No. 1 Ferguson, a wildcat, C S half NE SW Section 12-26-13e, Green County, was dry and abandoned at 1,540 feet. No showings were reported.

C. Nye has rig up for No. 2-A Freeman, SW SE SW Section 6-24-12, Greenwood County, and in No. 1-A Morgan, NW NE NW Section 7-24-12, got the top of the Mississippi lime at 1,768 feet, pay at 1,790-94½ feet, which was acidized. It pumped 120 bbls. of oil and 120 bbls. of water. It was plugged back to 1,791 feet and pumped 17 bbls. of oil. Siefkin and others were drilling at 500 feet in No. 1 Day, NE NW SW Section 33-27-11.

### Sedgwick County

Western Kansas Oil & Refining Co. and others completed a failure in No. 1 Betzen, a wildcat 440 feet from S and E lines of NE ¼ Section 17-26-3w, Sedgwick County. It had a hole full of water from Siliceous lime at 4,250-70 feet. It was abandoned.

Dickey Oil Co. had rig up for No. 2 Riley, SW NE SW Section 20-28-1e. T. C. Johnson and Atlantic Oil Producing Co. are using rotary to drill No. 1 Marsh, 330 feet from north and 1,544 feet from east lines of SW ¼ Section 20-28-1e, total depth 86 feet, waiting on cement.

### Chautauqua and Elk Counties

Griffin & Bell's No. 1 Silger, NE SE SE Section 25-30-10, Elk County, a wildcat, had lime at 1,314-20 feet from which they pumped a 36-bbl. initial production. It was not completed. Haddock and others in their No. 1 Hughes, NW SW SE Section 21-30-11, had a good showing of oil at 1,245-65 feet. It was acidized. Sand with an oil showing was found at 1,425-40 feet, total depth. It was not completed. Hicks and others were drilling at 500 feet in a wildcat test, No. 1 Lewis, SW SE SE Section 35-31-10.

In Chautauqua County, Central Oil Co. was drilling at 1,600 feet in No. 1 Crews, a wildcat, NE NE SW Section 8-32-12.


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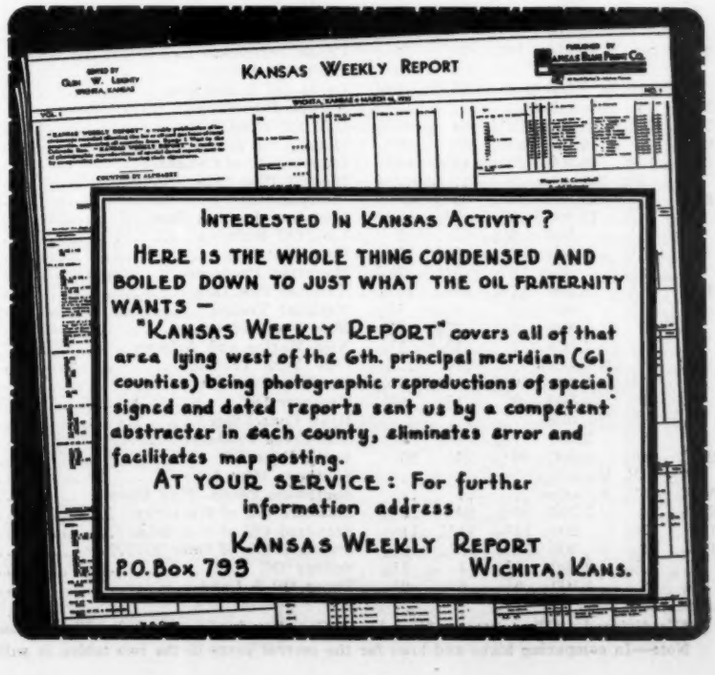
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# MARKET RECORD OF OIL SECURITIES

## Active Oil Stocks Listed on New York Stock Exchange

**Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange**

| 1935 High | 1935 Low | Week ended June 1 Sales | Week ended June 1 High | Week ended June 1 Low | Week ended June 1 Close | Stocks— | Total shares outstanding | Par value | Dividend rate | Payable or last paid | Dividends paid in 1934 | 1934 High | 1934 Low | 1933 High | 1933 Low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70¾ | 48½ | 3,900 | 69¼ | 63⅝ | 63⅝ | Amerada Corp. | 774,875 | N.P. | 50eQ | 4-30-35 | $2.00 | 55⅝ | 39 | 47⅝ | 18½ |
| 28 | 21⅜ | 19,700 | 27½ | 23⅝ | 23¾ | Atlantic Refining | 2,673,834 | $25 | 25cQ | 6-15-35 | 1.00 | 35¼ | 21½ | 32½ | 12⅜ |
| 10⅝ | 5⅞ | 27,400 | 9⅝ | 8¼ | 8¼ | Barnsdall Corp. A | 2,248,795 | $5 | .... | 5-11-31 | .... | 10 | 5⅞ | 11 | 3 |
| 7¾ | 3⅜ | 81,900 | 7¾ | 6⅛ | 7⅛ | Columbia Gas & Elec. | 11,610,036 | N.P. | .... | 5-15-34 | ‡ .25 | 19¼ | 6⅝ | 28⅛ | 9 |
| 10½ | 6½ | 56,100 | 10¼ | 8⅝ | 8¾ | Consolidated Oil Corp. | 14,218,835 | N.P. | 14c | 10-31-34 | .42 | 14¼ | 7¼ | 15¾ | 5 |
| 23 | 15⅛ | 29,200 | 22⅜ | 19⅜ | 19¾ | Continental Oil of Delaware | 4,738,593 | $5 | 12½c | 4-30-35 | .50 | 22⅜ | 15¾ | 19⅝ | 4⅞ |
| 19¼ | 11¾ | 7,100 | 18¾ | 15½ | 15½ | General Asphalt | 387,149 | $10 | .... | 6-15-32 | .... | 23½ | 12 | 27 | 4⅝ |
| 3⅜ | 1½ | 1,200 | 2⅞ | 2½ | 2½ | Houston Oil (new) | 1,098,618 | $25 | .... | 10-17-30 | .... | 5⅝ | 2½ | 7⅜ | 1⅞ |
| 1⅞ | ½ | 5,700 | 1⅛ | ½ | ⅝ | Louisiana Oil Refining | 1,302,158 | N.P. | .... | ..... | .... | 3⅜ | ¾ | 4 | ⅝ |
| 13⅞ | 9½ | 10,000 | 13¾ | 11¼ | 11⅜ | Mid-Continent Petroleum | 1,857,912 | $10 | 15c | 5-15-35 | .50 | 14¾ | 9⅛ | 16 | 3¾ |
| 19 | 9 | 6,200 | 19 | 15½ | 15½ | National Supply of Delaware | 382,591 | $25 | .... | 5-15-31 | .... | 21⅛ | 10 | 28⅝ | 4 |
| 14⅛ | 9¼ | 33,500 | 13 | 11⅛ | 11⅜ | Ohio Oil Co. | 6,563,107 | N.P. | 15c | 6-15-35 | .45 | 15⅞ | 8½ | 17⅝ | 4⅜ |
| 9½ | 7 | 2,500 | 9⅛ | 7⅞ | 7⅞ | Pacific Western Oil | 1,000,000 | N.P. | 40c | 11-30-34 | .40 | 9⅜ | 5½ | 9½ | 3 |
| 1⅜ | ⅝ | 300 | 1 | ¾ | ¾ | Panhandle P. & R. | 198,770 | N.P. | .... | ..... | .... | 2½ | ⅝ | 4¼ | ⅝ |
| 23 | 13¾ | 56,000 | 22⅝ | 19⅛ | 19¾ | Phillips Petroleum | 4,154,687 | N.P. | 25c | 6-1-35 | 1.00 | 20¾ | 13⅜ | 18¾ | 4⅝ |
| 11⅝ | 6½ | 10,600 | 9¾ | 8½ | 8½ | Plymouth Oil Co. | 1,014,082 | $5 | 25c | 3-30-35 | 75c & 4% Stk. | 16¾ | 7¼ | 17⅝ | 6⅝ |
| 9¼ | 5⅜ | 14,500 | 8⅝ | 7¼ | 7⅜ | Pure Oil | 3,038,370 | N.P. | .... | 9-1-30 | .... | 14⅞ | 6⅛ | 15⅜ | 2½ |
| 42½ | 29½ | 1,800 | 42¼ | 40⅞ | 41 | Royal Dutch N. Y. shares | 432,224 | $14 | $1.35 | 7-31-34 | 1.35 | 39½ | 28⅝ | 39¾ | 17⅝ |
| 35⅞ | 20¾ | 8,300 | 33⅝ | 28½ | 28¾ | Seaboard Oil of Delaware | 1,204,460 | N.P. | 15cQ† | 6-15-35 | 1.00 | 38⅜ | 20¾ | 43⅜ | 15 |
| 11½ | 5½ | 44,600 | 10⅞ | 9¼ | 9⅝ | Shell Union Oil | 13,070,625 | N.P. | .... | 6-30-30 | .... | 11½ | 6 | 11⅝ | 4 |
| 97 | 63¼ | 2,300 | 95⅛ | 87 | 87 | Shell Union Oil pfd. | 400,000 | $100 | .... | 7-1-31 | .... | 89 | 57 | 61 | 28½ |
| 18¾ | 13½ | 4,400 | 15 | 14⅛ | 14½ | Simms Petroleum | 461,698 | $10 | 50c | 2-1-35 | .55 | 17⅛ | 7¼ | 12⅜ | 4⅞ |
| 11⅜ | 6½ | 4,500 | 10⅜ | 9¼ | 9¼ | Skelly Oil | 1,008,514 | $25 | .... | 12-15-30 | .... | 11½ | 6 | 9⅞ | 3 |
| 15¾ | 11 | 54,600 | 15¼ | 13¼ | 13¼ | Socony-Vacuum | 31,019,694 | $25 | 15cQ | 3-15-35 | .60 | 19⅞ | 12½ | 17 | 6 |
| 38⅞ | 27⅜ | 33,700 | 38⅝ | 32⅜ | 33⅛ | Standard Oil of California | 13,102,900 | N.P. | 25c | 6-15-35 | 1.00 | 42⅞ | 26½ | 45 | 19½ |
| 27¼ | 23 | 20,900 | 26½ | 25⅜ | 25½ | Standard Oil (Indiana) | 15,941,894 | $25 | 25cQ | 6-15-35 | 1.00 | 32¾ | 23¼ | 34 | 17 |
| 32 | 26½ | 1,100 | 28 | 28 | 28 | Standard Oil of Kansas | 200,000 | $10 | 50cQ | 10-31-34 | 2.00 | 41 | 26 | 39⅞ | 12⅜ |
| 50½ | 35¾ | 47,500 | 49⅛ | 45 | 45¾ | Standard Oil of New Jersey | 25,740,065 | $25 | 50cSA‖ | 6-15-35 | 1.25 | 50⅛ | 39¼ | 47½ | 22⅜ |
| 75½ | 60½ | 800 | 75 | 72 | 72 | Sun Oil | 1,733,013 | N.P. | 25cQ | 6-15-35 | $1 & 9% Stk. | 74¼ | 51½ | 59 | 35 |
| 23¾ | 16½ | 20,200 | 23½ | 20¼ | 20⅜ | Texas Corp. | 9,486,417 | $25 | 25cQ | 7-1--35 | 1.00 | 29⅜ | 19⅝ | 30⅛ | 10⅜ |
| 4⅝ | 3¼ | 8,100 | 4¼ | 3⅞ | 4 | Texas Pacific Coal & Oil | 880,703 | $10 | .... | 12-31-29 | .... | 6½ | 2½ | 6½ | 1⅝ |
| 12 | 7⅝ | 31,800 | 12 | 10¼ | 10½ | Tide Water Associated | 5,618,672 | N.P. | .... | 2-16-31 | .... | 14⅜ | 8 | 11¾ | 3⅛ |
| 102¼ | 84 | 600 | 102⅛ | 101 | 101½ | Tide Water Associated pfd. | 666,524 | $100 | $3§ | 7-1-35 | §8.50 | 87 | 64½ | 65¼ | 23½ |
| 20⅛ | 14¾ | 15,500 | 20⅛ | 17 | 17⅛ | Union Oil of California | 4,386,070 | $25 | 25cQ | 5-10-35 | 1.00 | 20½ | 11½ | 23⅜ | 8½ |
| 26¼ | 20⅞ | 1,100 | 25¾ | 24 | 24 | Union Tank Car Co. | 1,200,000 | N.P. | 30cQ | 6-1-35 | 1.20 | 25¾ | 15⅝ | 22¾ | 10½ |
| 2⅝ | 1 | 900 | 2 | 2 | 2 | Wilcox Oil & Gas | 424,839 | $5 | .... | 5-10-28 | .... | 5¾ | 2 | 5½ | 2 |

*Ex-dividend. †Plus extras. ‡Payable in preferred stock. §On account of accumulated and current dividends. ‖Dividend 4/75 Mission Corp. paid 3-15-35.

## Active Oil Stocks Listed on New York Curb

**Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange**

| 1935 High | 1935 Low | Week ended June 1 Sales | Week ended June 1 High | Week ended June 1 Low | Week ended June 1 Close | Stocks— | Total shares outstanding | Par value | Dividend rate | Payable or last paid | Dividends paid in 1934 | 1934 High | 1934 Low | 1933 High | 1933 Low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 30½ | 100 | 39 | 39 | 39 | Buckeye Pipe Line Co. | 200,000 | $50 | 75eQ | 6-15-35 | $3.00 | 38 | 26 | 39¾ | 25 |
| 4¼ | 1⅝ | 4,500 | 3⅝ | 2⅜ | 3 | Carib Syndicate | 799,020 | 25c | .... | ..... | .... | 5½ | 1½ | 7¾ | ¼ |
| 157 | 115 | 50 | 131 | 131 | 131 | Chesebrough Mfg. Co. | 120,000 | $25 | $1Q† | 6-28-35 | 11.50 | 150 | 116 | 129 | 71 |
| 2¼ | ¾ | 94,700 | 2¼ | 1⅞ | 2 | Cities Service | 37,804,394 | N.P. | .... | 6-1-32 | .... | 4¼ | 1¼ | 6¼ | 1½ |
| 1¼ | ⅝ | 2,100 | 1¼ | ⅞ | 1 | Colon Oil | 2,200,000 | N.P. | .... | ..... | .... | 3¼ | ½ | 4 | ¼ |
| ⅞ | ⅜ | 700 | ⅞ | ⅜ | ⅞ | Cosden Oil | 399,687 | $1 | .... | ..... | .... | 3⅞ | ½ | 3⅞ | 1⅜ |
| 18½ | 10 | 24,500 | 18⅛ | 16 | 16 | Creole Petroleum | 6,974,356 | $5 | .... | ..... | .... | 14⅜ | 9⅝ | 12 | 4⅜ |
| 6⅝ | 4¼ | 900 | 6⅝ | 6 | 6 | Darby Petroleum | 509,696 | $5 | 25c | 1-25-35 | .50 | 7½ | 4⅛ | 8 | 2¼ |
| 2 | ¾ | 3,500 | 2 | 1¼ | 1¼ | Derby Oil & Refining | 263,162 | N.P. | .... | ..... | .... | 2¼ | 1 | 2¾ | ⅞ |
| 38 | 34 | No sales | .. | .. | .. | Eureka Pipe Line | 50,000 | $50 | $1Q | 5-1-35 | 4.00 | 37 | 30 | 41¾ | 20 |
| 74¾ | 50¼ | 7,000 | 72¼ | 64 | 64½ | Gulf Oil Corp. | 4,538,101 | $25 | .... | 10-1-31 | .... | 76¾ | 49¾ | 62 | 24 |
| 64 | 44 | 12,100 | 63¼ | 56 | 56⅞ | Humble Oil & Refining (new) | 8,923,935 | N.P. | 25eQ | 7-1-35 | §1.25 | 496 | 33¼ | 105½ | 40 |
| 22½ | 15⅜ | 23,400 | 22¼ | 19½ | 19⅞ | Imperial Oil of Canada | 26,857,152 | N.P. | 25cSA†‡ | 6-1-35 | .92½ | 17⅞ | 12⅝ | 15⅞ | 6½ |
| 5 | 3⅜ | No sales | .. | .. | .. | Indiana Pipe Line | 300,000 | $10 | 15eSA | 5-15-35 | .35 | 6⅞ | 3⅝ | 8 | 3⅛ |
| 39¾ | 28 | 21,600 | 39⅝ | 34⅝ | 35 | International Petroleum | 14,247,088 | N.P. | 75cSA†‡ | 6-1-35 | 2.28 | 33⅜ | 19⅜ | 23½ | 8⅜ |
| 9½ | 4⅜ | 19,400 | 9¼ | 7½ | 7⅝ | Louisiana Land & Exp. | 3,000,000 | N.P. | .... | ..... | .... | 5 | 2⅛ | 2¼ | ⅛ |
| 6¾ | 3½ | 500 | 5¼ | 5 | 5 | Lion Oil Refining | 270,000 | N.P. | .... | 10-27-30 | .... | 6 | 3⅜ | 9½ | 1¼ |
| 6¼ | 4½ | 1,500 | 6 | 5⅝ | 5⅝ | Lone Star Gas | 5,382,723 | N.P. | 15c | 2-15-35 | ‖ .16 | 8⅜ | 4¼ | 11⅞ | 4⅜ |
| 5½ | 4¼ | 900 | 5¼ | 5⅛ | 5⅛ | Mountain Producers | 1,682,182 | $10 | 15eQ | 4-1-35 | .60 | 5½ | 4 | 6½ | 2½ |
| 18⅛ | 11¾ | 3,700 | 17⅞ | 16⅝ | 16⅝ | National Fuel Gas | 3,810,183 | N.P. | 25eQ | 4-15-35 | 1.00 | 18½ | 13⅛ | 20 | 10 |
| 9 | 6¾ | 400 | 9 | 8½ | 8½ | National Transit | 500,000 | $12.50 | 40eSA | 6-15-35 | .75 | 9½ | 7 | 10 | 5½ |
| 2⅝ | 2 | 800 | 2⅛ | 2⅛ | 2⅛ | New Bradford Oil | 1,445,202 | $5 | 10eSA | 3-15-35 | .20 | 2½ | 1¾ | 2⅛ | ½ |
| 2¼ | 1 | 1,800 | 2 | 1⅞ | 1⅞ | New Mexico and Arizona | 1,000,000 | $1 | .... | ..... | .... | 2¾ | 1 | 1⅞ | ½ |
| 3⅜ | 3 | No sales | .. | .. | .. | New York Transit | 100,000 | $5 | 15eSO | 4-15-35 | .30 | 4¾ | 3 | 4⅞ | 3 |
| 7 | 5¼ | 100 | 6¼ | 6¼ | 6¼ | Northern Pipe Line | 120,000 | $10 | 25eSA | 7-1-35 | .50 | 7 | 4⅝ | 6⅛ | 4¼ |
| 2¼ | 1¼ | 10,500 | 2 | 1⅝ | 1⅝ | Pantepec Oil | 1,608,700 | N.P. | .... | ..... | .... | 2⅝ | ⅞ | 3¾ | ⅜ |
| 1½ | ⅝ | No sales | .. | .. | .. | Ryan Consolidated | 296,931 | N.P. | .... | ..... | .... | 3⅜ | ⅜ | 4¼ | ⅝ |
| 7½ | 5½ | 2,000 | 7⅛ | 6¾ | 7 | Salt Creek Producers | 1,496,859 | $10 | 20eQ | 5-1-35 | .80 | 7⅞ | 5½ | 9¼ | 3½ |
| 28⅜ | 21⅝ | 2,900 | 26½ | 24 | 25 | South Penn Oil | 1,200,000 | $25 | 30eQ | 6-20-35 | 1.20 | 26½ | 17½ | 22⅛ | 11 |
| 4⅝ | 3⅞ | No sales | .. | .. | .. | Southern Pipe Line | 100,000 | $10 | 15eSA | 3-1-35 | .25 | 5½ | 3½ | 6 | 2⅛ |
| 52½ | 45¼ | No sales | .. | .. | .. | Southwest Penna. Pipe Lines | 35,000 | $50 | $1Q | 4-1-35 | 5.00 | 47 | 41 | 43 | 24½ |
| 21⅝ | 18 | 7,700 | 20¾ | 20 | 20⅛ | Standard Oil of Kentucky | 2,606,983 | $10 | 25cQ† | 6-15-35 | 1.50 | 18⅝ | 14⅝ | 19¼ | 8⅝ |
| 12 | 7⅜ | 200 | 11½ | 11¼ | 11¼ | Standard Oil of Nebraska | 190,822 | $25 | .... | 6-20-34 | .50 | 16⅞ | 8¼ | 20½ | 11 |
| 19⅜ | 11½ | 900 | 17¼ | 16¼ | 16¼ | Standard Oil of Ohio | 753,740 | $25 | .... | 1-3-33 | .... | 28½ | 12¼ | 41 | 15½ |
| 1¼ | ⅞ | 2,000 | 1¼ | 1 | 1⅛ | Sunray Oil | 1,610,810 | $1 | .... | 4-15-31 | .... | 2 | ⅛ | 1½ | ¾ |
| 6⅞ | 5 | 1,100 | 6½ | 6⅛ | 6⅛ | Texon Oil & Land | 936,028 | N.P. | 15eQ | 3-29-35 | .90 | 11 | 4⅝ | 13¾ | 6¼ |

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Includes 50 cents on old $25 par value stock. ‖Payable in preferred stock.

**Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.**

# Edmond Pool in Oklahoma Has Two New Wells of Good Production; Busy Week in Keokuk

By JAMES McINTYRE

Only two completions were reported from the Fitts Pool in Pontotoc County, Oklahoma, the busiest drilling area in the State. On the other hand, locations were made for eight new wells. Nine completions were registered in the Greater Seminole area. Four of these were in the Keokuk Field in Seminole County, where the Misener sand is rich in oil. The Shell Petroleum Corp. plugged back two wells in the old Marshall Pool in Logan County and found the Tonkawa sand productive for 220 bbls. initially in one case and 180 bbls. in another. The wells were old Wilcox sand wells, completed below 6,000 feet. Two good wells were brought in in the Edmond Pool in Oklahoma County by the Marathon and Slick-Urschel companies, it being the first well of the latter company in that pool.

### Oklahoma Production

Estimated daily average production of Oklahoma for the week ending June 1 and for the preceding week follows:

| | Barrels | |
|---|---|---|
| | June 1 | May 25 |
| Allen | 7,800 | 7,575 |
| Asher-West Asher | 1,275 | 1,300 |
| Burbank | 8,650 | 8,650 |
| South Burbank | 11,000 | 11,000 |
| Balance Osage | 27,000 | 27,000 |
| Blackwell | 4,825 | 4,850 |
| Bristow-Slick | 9,100 | 9,100 |
| Chandler | 5,000 | 5,100 |
| Crescent | 6,175 | 6,925 |
| Cromwell | 4,350 | 4,375 |
| Cushing-Shamrock | 13,300 | 13,300 |
| Duncan district | 4,200 | 4,200 |
| Edmond | 2,200 | 3,100 |
| Fish | 10,800 | 11,175 |
| Fitts | 15,925 | 16,125 |
| Gray | 1,900 | 2,200 |
| Graham | 3,900 | 3,925 |
| Healdton | 9,250 | 9,400 |
| Hewitt | 4,750 | 4,750 |
| Holdenville | 1,525 | 1,500 |
| Keokuk | 1,050 | 1,625 |
| Konawa | 1,900 | 1,975 |
| Locien | 12,500 | 11,350 |
| Marshall-Lovell | 1,000 | 1,000 |
| Oklahoma City | 138,950 | 160,575 |
| Papoose | 1,300 | 1,300 |
| Polo | 3,150 | 3,375 |
| Sasakwa and Townsite | 2,650 | 2,975 |
| Sholem Alechem | 4,000 | 4,000 |
| Seminole Field: | | |
| Bowlegs | 11,550 | 12,025 |
| Carr City | 6,375 | 6,775 |
| Earlsboro | 10,075 | 10,175 |
| East Earlsboro | 9,600 | 9,550 |
| South Earlsboro | 1,175 | 1,225 |
| Little River | 15,175 | 14,775 |
| East Little River | 800 | 875 |
| Maud | 1,200 | 1,275 |
| Mission | 3,150 | 3,025 |
| Seminole | 9,050 | 9,975 |
| East Seminole | 1,050 | 1,100 |
| Searight | 3,625 | 3,525 |
| Total Seminole | 72,825 | 74,300 |
| St. Louis-Pearson | 26,250 | 27,100 |
| Tatums | 5,100 | 5,100 |
| Tonkawa-Garber-Thomas | 6,000 | 6,000 |
| Wewoka | 3,500 | 3,500 |
| Yale-Jennings | 5,100 | 5,100 |
| Other pools | 56,825 | 56,825 |
| Total Oklahoma | 494,775 | 523,650 |

### Pontotoc County

Paramount Petroleum Co.'s wildcat test, in southern Pontotoc County, No. 1 Graham, SW SE SW Section 13-1-7, which was drilled to 3,478 feet, was abandoned as a failure. It had Bromide sand at 3,115 feet; sands at 3,235 feet and 3,288-98 feet, where salt water developed. It was drilled on down picking up other sands at 3,405-08 feet and 3,473-78 feet, which showed more water. It was plugged back to Hunton lime topped at 2,490 feet, and shot and acidized with no results.

Moore and others completed No. 6 Craddock, SE NW SW Section 29-2-7, Fitts Pool. It flowed 408 bbls. the first hour and 338 bbls. the second hour through casing with gas at the rate of 2,000,000 feet per day. Bromide was topped at 3,960 feet, sands at 4,060 feet and 4,143 feet, McLish lime at 4,163-73 feet, total depth.

Moore and others' No. 2 Wirick, NE SE SW Section 29-2-7, an old well deepened from 4,042 feet, found sand at 4,048 feet, and the well flowed 273 bbls. in one hour. McLish was found at 4,064-70 feet and the hole was drilled to 4,140 feet. It flowed enough oil to give the well a potential of 3,293 bbls. per day and was recompleted.

In the Allen Pool, Pontotoc County, Sunray Oil Co.'s No. 12 Gilmore, NW SW SE Section 21-5-8, is a 4,000,000-foot gas well completed in sand at 940-59 feet. It had a 350-pound rock pressure.

Delaney and others' No. 4 Gilmore, SE cor. NE NE NE Section 29-5-8, pumped 30 bbls. in 24 hours from sand at 811-74 feet and was completed.

New work in the Fitts Pool started in the past week includes Phillips Petroleum Co.'s No. 14 Norris, NW NW SW Section 25-2-6, cellar and pits; Manahan and others' No. 2-A Reynolds-Wagner, 865 feet from north and 430 feet from east lines of SE quarter Section 18-2-7, rig; Moore and others' No. 2 McKoy, NW SW SW Section 28-2-7, location; Moore and others' No. 3 Harper, NE SW NE Section 29-2-7, location; same operators' No. 2 McKoy, NE SE SE Section 29-2-7, location; Moore and others' No. 3 Benton, NW SW NW Section 32-2-7, location; same operators' No. 4 Benton, NE SW NW Section 32-2-7, location; No. 5 Benton, SW NE NW Section 32-2-7, location. In the Allen Pool, Sunray Oil Co.'s No. 13 Gilmore, SW cor. SW NW SE Section 21-5-8, location.

Moore and others' No. 1 Harper, SW SW NE Section 29-2-7, had 30,000,000 feet of gas at 1,821 feet.

Phillips Petroleum Co.'s No. 4 T. Norris, SE SE SW Section 25-2n-6, in the Fitts Pool, which was drilled to 4,418 feet and into salt water, has been plugged back to 3,700 feet and whipstock set at 2,748 feet and the hole was being cleaned out.

E. H. Moore and others' No. 3 Akers, C NW NW NE Section 36-2-6, had Bromide at 4,295 feet, sands at 4,370 and 4,447 feet and McLish at 4,490-97 feet, total depth, flowed 390 bbls. in one and one-half hours from the first sand.

### Greater Seminole Field

Completions in the Greater Seminole area included the following wells:

Gypsy Oil Co.'s No. 2 Grayson, 990 feet from south and 530 feet from west lines of NW quarter Section 13-6-5, in the Gray Pool, Pottawatomie County, had Dolomite at 3,745 feet. At 3,803 feet it swabbed 302 bbls. in 24 hours and at 3,813 feet flowed 839 bbls. in 21 hours.

Champlin Refining Co.'s No. 6 Williamsee, SE NE SE Section 30-7-8, Fish Pool, Seminole County, a twin to No. 1, was drilled to 3,075 feet, missing Mayes and Woodford formations. It was a hole full of water and was plugged back to 3,044 feet and pumped 50 bbls. of oil and 250 bbls. of water from Wapanucka lime topped at 3,025 feet.

Magnolia Petroleum Co.'s No. 8 Reed, 305 feet from south and 1,090 feet from west lines of SE quarter Section 30-7-8, Fish Pool, was completed in Wilcox sand at 4,260-61½ feet, total depth. It flowed a potential production of 535 bbls. based on a six-hour flow through tubing.

Turman Oil Co.'s No. 2 Hubbard, NW SW NW Section 29-8-4, in the St. Louis district, Pottawatomie County, had Hunton lime at 4,332-45 feet, total depth. It was treated with acid and a 350-bbl. oil load. After the load was recovered it pumped 357 bbls. in 34 hours.

Sinclair Prairie Oil Co.'s No. 9 Campbell, SE NW NE Section 6-9-6, Seminole Pool, an old well plugged back to the base of the Hunton lime at 4,215 feet, was acidized, and swabbed 8 bbls. of oil in 24 hours.

Carter Oil Co.'s No. 2 Renton C-28, C S half NE NW Section 2-10-6, Keokuk Field, Seminole County, flowed 582 bbls. in 24 hours from Misener sand at 4,123-34 feet.

Magnolia Petroleum Co.'s No. 1 Brown, C E half SE NW Section 14-10-6, Keokuk Pool, had Misener sand at 4,117 feet and Hunton at 4,137 feet, total depth of 4,145 feet. It flowed 814 bbls. in 24 hours through casing and later

## Wildcat Operations in Oklahoma

Week Ending June 1

**NORTHERN OKLAHOMA**

**BLAINE COUNTY**

**Earl Ingrahm et al's No. 1 Masters,** SW NW NW Sec. 27-16-11w.
S.D. 1,240 ft.

**CADDO COUNTY**

Denver Prod. & Ref. Co.'s No. 1 Sah-Can, C SE SE Sec. 33-10-10w.
Drlg. 6,450 ft.; drill pipe stuck.

**H. W. Lee et al's No. 1 Horton,** NE NE NE Sec. 9-6-13w.
Rigged up; S.D.

**H. W. Lee et al's No. 1 Stacey Ferrell,** SW NE NE Sec. 3-6-13w; (2,000-ft. test).
T.D. 2,280 ft.; bldg. rig.

**CANADIAN COUNTY**

**R. Carl Larkin's No. 1 Brobine,** NW NW NE Sec. 33-13-5w.
Drlg. 6,805 ft.

**CLEVELAND COUNTY**

**Sinclair Prairie et al's No. 1 Franklin,** SE NW SE Sec. 21-10-2w.
Hunton 6,780 ft.; Viola 6,937 ft.; Simpson 6,987 ft.; cored from 7,051 to 7,288 ft.; top of Wilcox 7,269 ft.; T.D.

**COAL COUNTY**

Carter Oil Co. et al's No. 1 Thompson, C S½ NE NW Sec. 34-2-9.
R.U. for 7,000-ft. test.

**J. D. Petty Oil Co.'s No. 1 McMillan,** SW NW NE Sec. 16-1s-8.
S.D. 1,368 ft.

**GARVIN COUNTY**

**Anderson & Kerr et al's No. 1 Rodke,** NW NW SE Sec. 17-4-1w.
Location.

**Charles Carter and W. S. Key, Inc.'s No. 1 Wood,** C NW SW SE Sec. 5-4-3e.
S.D. 2,405 ft.

**GRANT COUNTY**

**Helmerich & Payne's No. 1 Crouse,** C NE SW Sec. 29-25-3w.
T.D. 6,212 ft., in lime; fishing for bit.

**GREER COUNTY**

**M. C. Ent and R. C. Camp's No. 1 Simington,** SW SE Sec. 29-5-21w.
T.D. 50 ft.

**Gled Oil Co.'s No. 1 Leeker,** SE cor. Sec. 6-4-21w.
Drlg. 1,460 ft.

**Morgan et al's No. 1 Carder,** C SW SE Sec. 19-4-22w.
Gas showing 2,220-24 ft.; drlg. 2,680 ft.

**W. Y. Rockwell et al's No. 1 Stephens,** C S½ S½ SE Sec. 32-6-24w.
Machine.

**D. E. Whatley et al's No. 1 Hamilton,** NW SE Sec. 25-4-24w.
Cellar.

**HUGHES COUNTY**

Caprock Oil Co.'s No. 1 Parks, SW SW SE Sec. 34-7-8.
Location.

**Dandridge & Crane's No. 1 Mead,** NW NW NE Sec. 17-5-9.
Drlg. 1,524 ft.

**Freeman et al's No. 1 Kite,** NW NW NE Sec. 8-6-10.
Top sand 700 ft.; show oil; S.D.

**Texas Co.'s No. 1 Keaton,** NW SW Sec. 4-8-10.
Hunton lime 3,724 ft.; coring 3,732 ft.

**KAY COUNTY**

**Bay Oil Co.'s No. 1 Holden,** SW SW SE Sec. 14-28-3.
5-in. 2,945 ft.; drlg. plugs.

**Lewis Prod. Co.'s No. 1 Summers,** SW cor. SE NW Sec. 17-27-2.
Spudded.

**J. T. Lindsay's No. 1 Waggoner,** NW NW NE Sec. 3-27-1.
T.D. 835 ft.; fighting cave.

**Marshall, Haddock et al's No. 1 Hermes.** SW SW NW Sec. 6-26-4.
R.U. machine.

**KIOWA COUNTY**

**Henson & Patton's No. 1 Buler,** NE cor. Sec. 11-6-15w.
Abd. at 517 ft.

**Rajah Oil Co.'s No. 3 Stone,** C SE NE Sec. 24-7-17w.
Gas 933-34 ft.; oil 944-52 ft.; may acidize; T.D. 1,004 ft.

**LINCOLN COUNTY**

**Carter Oil Co. et al's No. 1 McFarland C-34,** SW SW NE Sec. 18-12-4.
Wilcox sands at 5,279 ft. and 5,335 ft.; T.D. 5,345 ft.; will make Schlumberger test.

**Chester L. Carlock's No. 1 Young,** C N½ NW NW Sec. 23-15-5.
R.U. rotary.

**Mid-Continent Pet. Corp. et al's No. 1 Nunn,** SE SE NW Sec. 25-15-1.
Drlg. 4,840 ft.

**Chas. Ralph's No. 1 Young,** C N½ NW NW Sec. 23-15-5.
Spudded and S.D.

**Stanolind O. & G. Co. and Amerada Pet. Corp.'s No. 1 Cavanaugh,** SE NE Sec. 31-15-5.
T.D. 3,661 ft.; show of oil and 2,500 ft. of wtr. in hole; P.B. to 3,550 ft.

**Texas Co.'s No. 1 Palmer,** SE SW NW Sec. 28-14-5.
Rotary.

**LOGAN COUNTY**

**Anderson-Kerr et al's No. 1 Renfrow,** NE cor. Sec. 33-16-4w.
Mississippi lime 6,470 ft.; T.D. 6,640 ft.; drlg. 6,975 ft.

**Freeland et al's No. 1 Scrutchfield,** NW NW NE Sec. 9-16-1e.
Cellar.

**Houghton Royalty Co.'s No. 1 Townsite,** SW SW SE Sec. 13-17-1w.
Bldg. rig.

**Sinclair Prairie and Slick Urschel's No. 1 Koatsch,** SW cor. Sec. 23-15-2w.
Second Wilcox 6,322 ft.; T.D. 6,341 ft.; cored 6,341-43 ft.; bailing.

**Slick-Urschel et al's No. 1 Pennington,** C SW NE Sec. 10-16-1w.
Simpson dolomite 5,534 ft.; Wilcox 5,581 ft.; no show; lost circulation at 5,587 ft.

**J. C. Schaffer et al's No. 1 Hammond,** SE SE SW Sec. 10-15-4w.
Wilcox 7,039 ft.; cored 7,066-70 ft. in hard white sand; cored 7,079-83 ft.; 7,088-89 ft.; reamed to 7,090 ft.; cored and reamed to 7,102 ft.; dry and abd.

**Stanolind O. & G. Co. et al's No. 1 Nunn,** SE NW Sec. 25-15-1.
Drlg. 2,597 ft.

**MAJOR COUNTY**

**Indian Territory Illuminating Oil Co. and Continental Oil Co.'s No. 1 Fairview,** C E½ SW SE Sec. 32-22-14w.
Drlg. 2,050 ft.

**NOBLE COUNTY**

**Marathon Oil Co.'s No. 1 Gilbert,** NE cor. Sec. 34-23-2.
Wilcox sand 4,449 ft.; T.D. 4,480 ft.; flowed 1,793 bbls. in 7 days; may deepen.

**OKFUSKEE COUNTY**

**Amerada Pet. Corp.'s No. 1 Jaynes,** NW NW SW Sec. 30-10-10.
Hunton 3,690 ft.; 10,000,000 ft. of gas at 3,704 ft.; Wilcox sand 3,932 ft.; T.D. 4,025 ft.; 375 ft. wtr. in hole; P.B. to 3,882 ft.

**Olean Pet. Co.'s No. 3 Fish,** SE NE NW Sec. 36-10-10 (Wilcox sand test).
Wilcox sand 3,942-61 ft.; flows oil and wtr.; will shoot.

**Wilcox O. & G. Co.'s No. 1 Connelly,** SE NE SE Sec. 23-14-2e.
Location.

**OKLAHOMA COUNTY**

**Gypsy Oil Co.'s No. 1 Salisbury,** NW NE NE Sec. 13-14-4w.
Location.

**Gypsy Oil Co.'s No. 1 Shock,** NW SW SW Sec. 2-14-3w.
Wilcox sand 6,367-74 ft. and 6,448-56 ft.; no showing; P.B. to 6,315 ft. to test.

**Sinclair Prairie O. & G. Co.'s No. 1 Corbett,** NE NW NE Sec. 17-13-3w.
Drlg. 5,335 ft.

**Slick-Urschel Oil Co. et al's No. 1 Owen,** SE cor. Sec. 19-13-3w.
Drlg. 6,435 ft.

**OSAGE COUNTY**

**J. A. Freeberg et al's No. 1,** NE cor. SE Sec. 1-25-6.
Location.

**PAWNEE COUNTY**

**Robinson Drlg. Co.'s No. 1 Cockrell,** SW SE NW Sec. 28-23-4.
H.F.W.; T.D. 3,433 ft.; abd.

**Stanolind O. & G. Co.'s No. 1 Shunatana,** NE SW SE Sec. 32-22-3.
Location.

(Continued on Page 79)

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180 bbls. in two hours through tubing, from Misener and Hunton.

Carter Oil Co. and others' No. 1 Harris C-28, C W half SW SE Section 18-10-6, North Searight Pool, flowed 165 bbls. in 24 hours from Wilcox sand at 4,576-84 feet.

Carter Oil Co.'s No. 3 Canard, C-28, C N half SE SW Section 35-11-6, Keokuk Pool, flowed 678 bbls. in 24 hours through tubing from Misener at 4,112 feet and Hunton at 4,122 feet, total depth 4,124 feet, which had been acidized.

New work in the Greater Seminole area includes Gypsy Oil Co.'s No. 3 Grayson, NE SW NW Section 13-6-5, location; Indian Territory Illuminating Oil Co.'s No. 1 Church, SW NW NW Section 13-6-5, both in Pottawatomie County; Texas Co.'s No. 8 Janey, NE NE SW Section 11-7-6, location; Champlin Refining Co.'s No. 9 See, 280 feet from north and 990 feet from east lines of the SE quarter Section 30-7-8, Seminole County, location; Gypsy Oil Co.'s No. 3 Coker, NE SW NE Section 2-8-5, Seminole County, location; Summit Drilling Co.'s No. 1 Nero, SW NE NE Section 2-8-5, location; Texas Co.'s No. 7 Mayhue, NW NE NW Section 14-9-6, Seminole County, location.

Mid-Continent Petroleum Corp.'s No. 1 Bruno, SW SE SE Section 31-7-5, Pottawatomie County, deepened from 4,119 feet in Dolomite, had a hole full of water from Wilcox sand at 4,223-25 feet, total depth.

Commercial Drilling Co.'s No. 1 Davis, SW SE NE Section 30-7-8, Fish Pool, Seminole County, had Dolomite at 4,075 feet and sandy Dolomite at 4,105-36 feet. It swabbed and flowed 371 bbls. in 13 hours. The crew was rigging up standard tools.

Pure Oil Co.'s No. 1 Wiley, SE SE NW Section 8-8-5, in the Maud Pool, Pottawatomie County, was in Wilcox sand at 4,303-04 feet, total depth, with 1,800 feet of water in the hole. It was plugged back to 4,300 feet and acidized.

Olean Petroleum Co.'s Wilcox sand test, No. 3 Fish, SE NE NW Section 36-10-11, in the Weleetka district, Okfuskee County, which made flows of 31, 28 and 25 bbls. of oil with about 30 bbls. of water per day on three successive days, had not yet been shot.

### Osage County

Following were the completions in Osage County in the past week:

J. R. Higgins' No. 16, 1,172 feet from south and 700 feet from west lines of SE quarter Section 25-23-8, shot with 130 quarts at 2,122-60 feet in sandy lime, swabbed 20 bbls. in 24 hours.

Barnsdall Oil Co.'s No. 17, 871 feet north and 79 feet west of SE cor. Section 18-23-12, dry at 1,440 feet, and will be used as a pressure well.

Coralena Oil Co.'s No. 14 (formerly reported as A. H. Kasishke), 1,000 feet north and 968 feet east of C Section 16-24-7, flowed and swabbed 50 bbls. of oil and 7 bbls. of water from Bartlesville sand at 2,625-2,711 feet, shot with 140 quarts at 2,654-2,711 feet.

Lewis Production Co.'s No. 7, SW NE NW Section 21-24-7, Bartlesville sand at 2,687-2,723 feet, shot with 70 quarts, estimated at 450 bbls.

Western American Oil Co.'s No. 21, SE cor. NW NW Section 4-24-10, deepened from 1,489 feet to Bartlesville sand at 1,989-2,047 feet and shot, pumped 15 bbls. in 24 hours.

Locations have been made for Danciger Oil & Refining Co.'s No. 1, NE cor. Section 8-20-10, and Mideo Oil Corp.'s No. 4, SW cor. SE SE SW Section 34-21-8, a twin to No. 1 Osage Leaseholding Co., will redrill a plugged well, No. 8, 1,302 feet south and 300 feet west of NE cor. Section 6-22-11. Continental Oil Co. will use a rotary to drill No. 4, SW NW NW Section 22-24-7, and location has been made. Galt Brown has made location for No. 2, SE cor. SE NW Section 14-24-10.

### Pawnee County

Stanolind Oil & Gas Co. made a location for a wildcat test in Pawnee County, No. 1 Shunatana, NE SW SE Section 32-22-3.

### Grady County

In the Knox Pool, Grady County, Magnolia Petroleum Co.'s No. 7 Harrison, SE cor. NE Section 28-3n-7w, made an 82-bbl. completion, producing from sand at 2,455-61 feet, total depth. It flowed through 2-inch tubing.

### Kiowa County

Henson & Patton abandoned No. 1 Beeler, NE cor. Section 11-6-15w, Kiowa County, a wildcat test, at 517 feet. It had a showing of gas at 492-94 feet.

### Noble County

In the Lucien Pool, Noble County, Magnolia Petroleum Co. completed No. 1 Viets, C SW SW Section 27-20-2w. It is a 105-bbl. pumper from Wilcox sand at 5,081-98 feet. Second sand at 5,143-55 feet showed water.

Shell Petroleum Corp. and others have cellar dug for No. 2 Ed Farr C 26, 1,300 feet from south and 330 feet from east lines of NE quarter Section 19-20-2w, Lucien Pool.

Skelly Oil Co. has rig on the ground for No. 1 Hannah, NE SW SW Section 22-22-2w, in the Polo Pool.

Magnolia Petroleum Co.'s No. 1 Sharp, C SW SW Section 34-20-2w, in the Lucien Pool, Noble County, had Viola lime at 4,939 feet, and at 4,970-75 feet, the base of the Viola, the hole filled 3,000 feet with oil in 16 hours. The well was estimated at 50 bbls. per day at that depth. Simpson Dense was topped at 4,985 feet, Dolomite at 4,990 feet and the well was drilling at 5,010 feet.

### Oklahoma County

Anderson & Kerr Oil Corp.'s No. 1 Earps, 903 feet south and 213 feet west of NE cor. Section 22-11-3w, in the Oklahoma City, Field, Oklahoma County, was a failure. It was drilled to 6,585 feet where it had 1,000 feet of water in the hole. It was plugged back to various levels up to 5,851 feet and abandoned. This test had no Wilcox sand.

Phillips Petroleum Co. made a location for No. 2 Freeburg, C of Lot 35, Block M, Oak Park Addition, NE SW NE Section 34-12-3w. Champlin Refining Co. made location for No. 1 Sutton, 1,144 feet south and 1,070 feet east of the NW cor. Section 35-12-3w. Amerada Petroleum Corp. and Stanolind Oil & Gas Co. have pits dug for No. 3 Sueneram, SE NE NE Section 6-13-3w, in the Edmond Pool, and have made location for No. 4 Sueneram, SW NE NE Section 6-13-3w. Gypsy Oil Co. made a location for a wildcat test, No. 1 Salisbury, NW NE NE Section 13-14-4w, in the northwestern part of the county.

Slick-Urschel, Inc., and others' No. 1 Sueneram, NE NW NE Section 6-13-3w, in the Edmond area, had second Wilcox sand at 6,657 feet and drilled to 6,722 feet. Bailed down, the well flowed 792 bbls. the first hour; 500 the second; 625 the third; 195 the four, and 231 bbls. in the next half hour, for a total of 2,342 bbls. in four and one-half hours. Gas was estimated at 18,000,000 feet a day. There was some sand coming with the oil and the flow indicated the hole was bridging part of the time.

Marathon Oil Co.'s No. 5 Dahl, SW SE SE Section 31-14-3w, had Wilcox sand at 6,545 feet. It was drilling at 6,639 feet. Same company's No. 1 Dahl, NE NE SW Section 31-14-3w, had Wilcox sand at 6,643-6,718 feet, and flowed 894 bbls. in five hours after being bailed in.

### Logan County

J. C. Shaffer's No. 1 Hammond, a wildcat in SE SE SW Section 10-15-4w, Logan County, was dry and abandoned at 7,102 feet. It had Wilcox sand at 7,039 feet and cored and reamed to 7,102 feet, finding only hard white and salty sand.

Continental Oil Co.'s No. 1 McConnell, C SE SE Section 28-17-4w, Crescent Pool, will be deepened from 6,148 feet and preparations are being made. Shell Petroleum Corp. plugged back No.

6 McCulley in the Marshall-Lovell area, NE SW SE Section 30-19-4w. The pipe was perforated at 3,900-30 feet, Tonkawa sand, and the well flowed by heads 220 bbls. of oil with 250,000 feet of gas in 24 hours, with no water. It was an old Wilcox sand well at 6,173 feet, total depth. Same company plugged back No. 10 McCulley, NE NW SE Section 30-19-4w, from 6,010 feet and perforated casing at 4,640-90 feet, Layton sand, and 3,920-60 feet, Tonkawa sand. There was no showing in the Layton, but the Tonkawa sand produced 183 bbls. of oil and 160 bbls. of water on a 24-hour swabbing test. It made 150,000 feet of gas. Phillips Petroleum Co. made a location for No. 1 Pfeiffer, C NE NE Section 4-19-2w, Logan County, in the southern end of the Lucien Pool.

Carter Oil Co. and Gypsy Oil Co.'s No. 1 Walker, C NE NE Section 33-17-4w, Crescent Pool, deepened from 6,114 feet to Second Wilcox sand at 6,225-45 feet, flowed 2,370 bbls. in 24 hours with

(Continued on Page 88)

## Oklahoma Wildcats

(Continued from Page 77)

Trees Oil Co.'s No. 1 Susan Wedd, C SE SE Sec. 27-24-6.
Big lime 2,572 ft.; drlg. 2,650 ft.

**PITTSBURG COUNTY**

Choctaw Gas Co.'s No. 1 Bunyard, SE SE NE Sec. 18-7-18.
Drlg. 1,305 ft.
McAllister Pet. Corp. et al's No. 1 Chunn, C SE NW Sec. 29-4-14.
T.D. 1,520 ft.; pipe collapsed; S.D.
P. H. Gray et al's No. 1 Lee, NW SE Sec. 12-5-12.
T.D. 1,210 ft.; fishing tools; S.D.

**PONTOTOC COUNTY**

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-3-6.
S.D. 2,920 ft.
Philip Boyle's No. 1 McCracken, NE NW NW Sec. 31-5-4.
T.D. 2,170 ft.; set 7-in. csg.; bailing.
Charles E. Carter's No. 1 Wood, NW SW SE Sec. 5-4-3.
S.D. 2,070 ft.
Continental Oil Co.'s No. 1 McCarty, C SW NW Sec. 12-1-7e.
Location.
Crabb-Craw Oil Co.'s No. 1-A Breco, SE NE SW Sec. 2-4-6.
Sand 1,106-18 ft.; pumped 10 bbls. in 24 hrs.; S.D.
W. A. Delaney et al's No. 1 Fulsome, SE NE Sec. 35-4-6.
Location.
Fleetborn Oil Corp.'s No. 1 Oliver, NE NW SE Sec. 21-4-5.
Bromide 1,895 ft.; sand 2,158 ft.; dry; McLish 2,067 ft.; T.D. 2,229 ft.; dry; P.B. to 1,665 ft.
Mudge O. & G. Co.'s No. 1 Clampett, SW NW NW Sec. 10-2-6.
S.D. 915 ft.
Paramount Oil Co.'s No. 1 Graham, SW SE SW Sec. 13-1-7.
500 ft. wtr. in hole from second Bromide sand at 3,258-98 ft.; top lime 3,357 ft.; sand 3,405-08 ft.; sand 3,473-78 ft.; H.F.W.; P.B. to Hunton and shot at 2,480-2,500 ft. and then acidized; dry and abd.
Ollette & Kroeger's No. 1 Duver, NW SE Sec. 35-1n-6e.
S.D. 1,300 ft.
Southern Oil Co.'s No. 1 Walker, NW NW SW Sec. 11-4-6.
H.F.W. 1,410-30 ft.
Leonard Williams et al's No. 1 Breedon, NW cor. Sec. 6-2-5.
Spudded and S.D.

**PUSHMATAHA COUNTY**

Ungerman et al's No. 1 Misser, SE SW SW Sec. 35-3s-18e.
Deepening from 2,435 ft.; drlg. 3,110 ft.

**SEMINOLE COUNTY**

L. Cooper's No. 1 Chandler, NE SE SW Sec. 4-5-6.
S.D. 1,780 ft.
Ray Dorris and J. T. Hall's No. 1 Dorris, SE SE SW Sec. 31-10-7.
Sand 520-60 ft.; H.F.W.; S.D. 608 ft.
Verser & Clay et al's No. 1 Thomas, NE SE NW Sec. 1-6-6.
S.D. at 2,502 ft.
Tomp Phillips et al's No. 1 Abbott, NE cor. Sec. 33-3-7.
Drlg. 2,630 ft.

**WASHITA COUNTY**

Okla.-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 21-8-18w.
T.D. 2,430 ft.; lost tools in hole; rig rebuilt; S.D.
L. P. McWhirter's No. 1 fee, SW cor. Sec. 34-3n-19w.
Drlg. 400 ft.

**SOUTHERN OKLAHOMA**

**ATOKA COUNTY**

Amerada Pet. Corp., Stanolind O. & G. Co., et al's No. 1 Travelers Life Ins. Co., SW NW SE Sec. 25-1s-9e.
Location.
Clark et al's No. 1 Morrison, SE cor. Sec. 33-1-14.
S.D. 200 ft.
Claro et al's No. 1 Bass, 510 ft. N and 1,170 ft. E of C Sec. 9-1s-14e.
Fishing 1,250 ft.
Keaton et al's (Brookshire) No. 1 Roland, NW NE NE Sec. 18-3-10.
H.F.W. 3,844 ft.; P.B. 757 ft.; treated with acid; dry and abd.
Keaton et al's No. 1-A Roland, NE cor. NW NE NE Sec. 16-3s-10e.
C.D. 883 ft.
Malernee et al's No. 1 D. O. K. Land Co., C SE SE Sec. 36-2s-13.
S.D. 3,115 ft.
R. H. Pierce et al's No. 1 Aetna Life Ins. Co., NW SW NE Sec. 10-1n-13e.
Rig.
H. W. Sears et al's No. 1 Downing, SE NW Sec. 17-1s-14.
Moving in tools.

**BRYAN COUNTY**

C. B. Welch's No. 1 Collins, NE NE Sec. 19-5s-8e.
T.D. 570 ft.
Trio Oil Co.'s No. 1 Gilbert, SW NE SW Sec. 25-8s-7.
Oil sand 600-03 ft.; S.D. for csg.

**CARTER COUNTY**

Bland et al's No. 1 Center, NE cor. Sec. 6-4s-2e.
Rigged up.
Waco Turner's No. 1 Munson, NE NW NE Sec. 35-5s-2w.
T.D. 3,856 ft.; S.D.
Carter Oil Co.'s No. 1 Carter-Williams, SW NE SW Sec. 27-2s-2w (7,000-ft. test).
Drlg. 6,004 ft.
Paul Robb's No. 1 Burton, 660 ft. N and 185 ft. W of C Sec. 31-1s-2w.
Location.

**CHOCTAW COUNTY**

Burns et al's No. 1 Hallum, NE NW NW Sec. 4-7s-20.
Rigging up.

**COMANCHE COUNTY**

H. W. Baker's No. 1 Miller, SE SW SE NE Sec. 22-2-13w.
S.D. 120 ft.
Oscar Jones' No. 1-A Sheets, NE SW Sec. 26-3-10w.
Machine.
F. F. Stevens' No. 1 Green, SE SW Sec. 2-1-13w.
S.D. 1,600 ft.; (corrected depth).

**HARMON COUNTY**

J. J. Mathis' No. 1 Keith, SE NW SW Sec. 12-5-26w.
Rig timbers.

**JACKSON COUNTY**

Associated Oil Co.'s No. 1 Harrell, NE NE SE Sec. 13-1-21w.
Drlg. 700 ft.
J. G. Buel et al's No. 1 Kizziar, SE SE NE Sec. 2-2n-22w.
Drlg. 2,148 ft.
Burke-Greis Oil Co.'s No. 1 Millbrant, SW NW SW Sec. 31-3-19w.
Drlg. 780 ft.
Gypsy Oil Co.'s No. 1 Boucher, NW SW SW Sec. 32-1-19w.
U.R. 6⅝-in. csg. 2,032 ft.; 1,500 ft. wtr.
Gypsy Oil Co.'s No. 1 Stokes, SE NW SW Sec. 11-1-20w.
Lime 1,709-11 ft.; T.D. 1,722 ft.; S.D.
Loper et al's No. 1 Conrad, NE cor. Sec. 35-1s-19w.
Drlg. 1,505 ft.
Marshall & Burnham's No. 1 Hess, NE SW NE Sec. 27-1s-20w.
S.D. 1,160 ft
Palo Duro Oil Co.'s No. 1 Ealum, SW SW SE Sec. 16-2-21w.
SD. 1,080 ft.
Robberson & Suppes' No. 1 Walker, SW cor. Sec. 19-4-20w.
Granite wash 665-750 ft.; H.F.W.; S.D.
Selby O. & G. Co.'s No. 1 Mack, NW cor. NW SW Sec. 5-2n-20w.
Drlg. 1,460 ft.
Triangle Oil Co.'s No. 1 Fox, E½ W½ NW Sec. 11-3n-20w.
T.D. 600 ft.; skidded rig for new hole; drlg. 30 ft.
Whatley & Whatley's No. 1 Holt, NW SW SE Sec. 20-1n-20w.
S.D. 1,430 ft.

**JEFFERSON COUNTY**

Gypsy Oil Co.'s No. 1 James, SW SE SE Sec. 30-6s-6w.
Drlg. black shale 1,882 ft.
Ben H. Levy et al's No. 1 Ryan, NW cor. Sec. 16-6s-6w.
10-in. at 35 ft.; drlg. cmt.

**JOHNSTON COUNTY**

W. A. Delaney et al's No. 1 Diamond, NW NE SE Sec. 5-1s-8.
Drlg. 2,100 ft.
Schermerhorn Oil Co.'s No. 1 Rich, SW SE SE Sec. 25-4s-4e.
Testing Bromide sand 490-95 ft.

**LEFLORE COUNTY**

McCraw et al's No. 1 Tidwell, C NW SE Sec. 17-3-22.
Rig on ground.

**LOVE COUNTY**

Amerada and Stanolind's No. 1 W. & D. NW SE SE Sec. 27-6s-2e.
T.D. 1,872 ft.; crooked hole; abd.

**McCURTAIN COUNTY**

J. V. Scrivener et al's No. 1, NE SW SW Sec. 24-6s-21.
Abd. at 970 ft.; no showings.

**MARSHALL COUNTY**

Jess Cook et al's No. 1 May, NE NW Sec 12-8s-5.
Drlg. 75 ft.
Paul Robb's No. 1 Vittetoe, C NE SE Sec 11-5s-4e.
Top Sylvan shale 5,405 ft.; T.D. 5,461 ft.
S.D.

**MURRAY COUNTY**

Equitable O. & G. Co.'s No. 1 Ferguson, NE NE SW Sec. 36-1s-3.
Tulip 845-940 ft.; fresh wtr.; drlg. 940 ft.
Hornsby & Jones' No. 1 Sadler, NE NE NW Sec. 20-1-2.
Location.

**STEPHENS COUNTY**

Wm. Angle et al's No. 1 Cooper, NE NW NW Sec. 23-2-7w.
T.D. 3,406 ft.; R.U. rotary; S.D.
Geo. Pace et al's No. 1 Daily, NE NE NE Sec. 26-1n-8w.
Set 10-in. pipe at 53 ft.

**TILLMAN COUNTY**

J. G. Buell et al's No. 1 Haught, SE NE Sec. 22-1-16w.
Drlg. 823 ft.
Cockburn & Boose's No. 1-A Nichols, SE cor. Sec. 28-2s-19w.
S.D. 3,022 ft.
Rock Island Ref. Co.'s No. 1 Lynch, C SE SW Sec. 35-1s-16w.
T.D. 310 ft.; crooked hole.
Loper et al's No. 1 Conrad, NE cor. Sec. 35-1s-19w.
Drlg. in brown shale, 1,660 ft.


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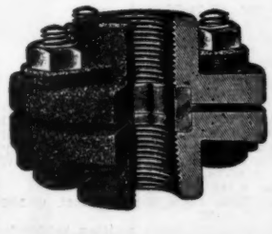

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# New Monument District Is the Center of Interest Following Amerada Corporation Completion

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., June 3.—The center of interest in New Mexico is Amerada Petroleum Corp.'s No. 1-D State, in the new Monument Pool in Lea County, which flowed 1,061 bbls. and 7,348,000 feet of gas through the casing in two hours. There were no completions or new locations in the Eunice Pool. Texas Co. completed No. 2 Ogg in the Cooper Pool for 32 bbls. an hour and General Crude Oil Co.'s No. 1 Woolworth made 168 bbls. an hour. Two new locations were reported in the Cooper Pool. There were no completions or new locations in the Jal Pool. Gypsy Oil Co.'s No. 4 Graham-State, northwest edge of Hobbs Pool, produced at the rate of 8,754 bbls. of fluid a day of which 4,110 bbls. was pipe line oil. One new wildcat was spotted in the Tatum area and the Maljamar Pool is extended 1 mile to the southeast. Two wells were plugged and abandoned in Eddy County in Tignor, Etz & Keyes' No. 1 State, and Fred Brainard's No. 1 fee.

Two new locations, both in the Iles Field in Colorado, were made by Texas Co. and Stanolind Oil & Gas Co.

California Co.'s No. 1 Holst, discovery well on the Quealy Dome, Albany County, Wyoming, averaged 600 bbls. a day on a 10-day test. California Exploration Co.'s test on the Spence Dome in Big Horn County was plugged and abandoned. Ohio Oil Co.'s No. 6 Lamb, in the Lance Creek Field, made 65 bbls. in 55 minutes from one horizon and 100 bbls. an hour from another horizon in the Sundance, on drill stem tests.

Two average wells were completed and two new locations were reported in the Cut Bank Field in Montana.

## NEW MEXICO

### Monument Area—Lea County

The completion last week by Amerada Petroleum Corp. of the largest flowing well in New Mexico, outside of the Hobbs Pool, in the Monument Pool to the north of the Eunice Field and the starting of two more wells is attracting considerable attention to the new district. This operation is 7 miles north of the Eunice Pool, 10 miles southwest of the Hobbs Field and 15 miles west of the Gaines County, Texas, boundary.

Amerada brought in the new pool last March in its No. 1-D State, C NW NW Section 1-20-36, drilled to 3,954 feet and plugged back to 3,946 feet where it made 1,801 bbls. in 12 hours and 20 minutes through 3-inch tubing after treating with 2,000 gallons of acid. Pay was at 3,750-3,946 feet and elevation 3,590 feet. The oil comes from the same producing horizon as in the Hobbs Pool and tests 32 gravity.

Amerada then moved to the offset unit on the north and started No. 1-F State, C SW SW Section 36-19-36, 1,320 feet north of the discovery. It was completed at 3,903 feet from pay at 3,805-3,903 feet and flowed 1,061 bbls. of oil in two hours with 7,348,000 feet of gas through the casing after acidizing with 2,000 gallons. It was then tested for six hours through 2½-inch tubing and made 1,060 bbls. of oil and 1,624,000 feet of gas. The back pressure on the casing was 500 pounds and on the tubing 120 pounds. After making the test through the tubing the well was shut in for pipe line connections. The tests indicated the well has a capacity of around 12,000 bbls. a day initial production.

The high upon which the two wells were completed was located by Geophysical Research Corp. and confirmed by Amerada's own geological staff. Acreage in the area is held by Texas Co., Gypsy Oil Co., Superior Oil Co., Repollo Oil Co., Shell Oil Co., Ohio Oil Co., Sun Oil Co., Continental Oil Co., and Anderson-Prichard Oil Corp.

Two new locations were made this week. These are Amerada Petroleum Corp.'s No. 1 Andrews, C NW NW Section 12-20-36, 1 mile south of the discovery, and Jeffers Oil Co.'s No. 1 Britt, C SE NW Section 7-20-37, 2 miles southeast of the discovery.

The most important drilling test is Texas Co.'s No. 1 Saunders, C SE SW Section 18-19-37, 3 miles north and 1 mile east of the discovery. This week it was reported drilling at 2,470 feet in anhydrite. It topped anhydrite at 1,288 feet and bottomed salt at 2,455 feet. Elevation is 3,693 feet. Measured on the base of the salt it is running about 87 feet lower than the discovery.

Amerada Petroleum Corp.'s No. 1 Andrews, C NW NW Sec. 12-20-36.
Location.
Jeffers Oil Co.'s No. 1 Britt, C SE NW Sec. 7-20-37.
Location.
Shell Pet. Corp.'s No. 1-E State, C SE SE Sec. 35-19-36.
Drlg. 2,030 ft. in anhydrite and red beds.
Superior Oil Co.'s No. 1 State, C NE NE Sec. 2-20-36.
Rig up.
Texas Co.'s No. 1 Saunders, C SE SW Sec. 18-19-37.
Drlg. 2,470 feet in anhydrite; T.A. 1,288 ft.; B.S. 2,455 ft.; elev. 3,693 ft.

### Eunice Area

There were no completions or new locations in the Eunice area.

Amerada Pet. Corp.'s No. 1 Houston, C SE NE Sec. 7-21-36.
Drlg. 3,175 ft., lime and anhydrite; gas show 2,825-30 ft.
Atlantic Oil Prod. Co.'s No. 1-G State, C SE SW Sec. 5-21-36.
Rigging up spudder.
Atlantic Oil Prod. Co.'s No. 1-E State, C NE SW Sec. 5-21-36.
S.D. 3,750 ft. for csg.; D.S. test at 3,700-40 ft. showed 30 ft. of mud and gas in 15 min.
Continental Oil Co.'s No. 20-C-4 State, C SE SW Sec. 20-21-36.
T.D. 3,965 ft., lime; flowed 50 bbls. per hr. through 2½-in. after acidizing with 2,000 gals.; testing.
Continental Oil Co.'s No. 20-C-5 State, C SW SW Sec. 20-21-36.
Drlg. 3,152 ft., anhydrite and lime.
Continental Oil Co.'s No. 9-B-3 Meyers, C SE NW Sec. 9-21-36.
Drlg. 3,474 ft. in lime.
Continental Oil Co.'s No. 9-B-4 Meyers, C NE NW Sec. 9-21-36.
Rig up.
Continental Oil Co.'s No. 30-A-2 Lockhart, C NE NE Sec. 30-21-36.
Drlg. 3,385 ft., lime; gas show 3,167-86 ft.
Empire G. & F. Co.'s No. 1-C State, NW NW SW Sec. 16-21-36.
Spudded May 20; W.O.C. 15½-in. at 57 ft. with 50 sacks.
General Crude Oil Co.'s No. 1-D State, C NW SW Sec. 32-21-36.
S.D. 70 ft.
Humble O. & R. Co.'s No. 3-B State, C NW SE Sec. 29-21-36.
Coring 3,860 ft. in lime.
Humble O. & R. Co.'s No. 4-B State, C NW NE Sec. 29-21-36.
Rig.
Ohio Oil Co.'s No. 3 State-McDonald, C NE SW Sec. 16-22-36.
T.D. 3,797 ft.; D.S. test 3,600-75 ft.; 50,000 ft. of gas in 1 hr.; at 3,675-3,716 ft. 2,000,000 ft. of gas; at 3,692-93 ft. oil and gas show; at 3,797 ft. 2,000,000 ft. dry gas.
Repollo Oil Co.'s No. 2 Adkins, SW SW NE Sec. 9-21-36.
Drlg. 3,461 ft., lime.
Rowan Drlg. Co.'s No. 1 Elliott, C NE SW Sec. 17-22-37.
T.D. 4,015 ft., lime; waiting Schlumberger test; D.S. test at 3,805-31 ft. showed 900 ft. of sulphur wtr. and gas in 40 min.; cored oil shows at 4,008-15 ft., 3,838-49 ft., 3,915-26 ft., and 3,845-61 ft.
Shell Pet. Corp.'s No. 1-A State, C SE NE Sec. 12-21-35.
T.D. 4,464 ft.; P.B. to 3,926 ft.; C.O. at 3,903 ft. and shot with 30 qts. and acidized with 3,000 gals.; swbd. 75 bbls. of oil and 31 bbls. of wtr. in 6 hrs.; pulling tubing to C.O. and reacidize.
Skelly Oil Co.'s No. 3-B State, C NE NW Sec. 16-21-36.
W.O.C. 9⅝-in. at 1,666 ft. with 400 sacks; T.A. 1,355 ft.

### Cooper Area

Two completions and two new locations, all offsets, were reported in the Cooper Pool.

Texas Co.'s No. 2-B Ogg, C SE NE Section 34-24-36, was completed at 3,501 feet in the pay at 3,496-3,500 feet and made 32 bbls. an hour, open flow, with 3,648,000 feet of gas. The 7-inch is at 3,354 feet, the 2½-inch at 3,500 feet, and the elevation is 3,283 feet.

The other completion was General Crude Oil Co.'s No. 1 Woolworth, C NW SE Section 26-24-36, drilled to 3,505 feet and made 168 bbls. per hour, open flow, with 3,000,000 feet of gas from pay 3,490-3,505 feet after acidizing with 3,000 gallons. Elevation is 3,316 feet.

The new locations are Continental Oil Co.'s No. 14-A-4 Vaughn, C NW NW Section 14-24-36, and Amerada Petroleum Corp.'s No. 3 Everett, C NE SE Section 34-24-36. Last named is building rig.

Amerada Pet. Corp.'s No. 2 Isbell, C NE NE Sec. 15-24-36.
Drlg. 1,472 ft. in anhydrite.
Amerada Pet. Corp.'s No. 3 Everett, C NE SE Sec. 34-24-36.
Bldg. rig.
Amos G. Carter et al's No. 1 Mattix, C SE NW Sec. 3-24-37.
Drlg. 3,286 ft. in sandy lime.
Continental Oil Co.'s No. 14-A-4 Vaughn, C NW NW Sec. 14-24-36.
Location.
Continental Oil Co.'s No. 27-A-1 Gates, C SE SE Sec. 27-24-36.
Location.
Continental Oil Co.'s No. 14-A-3 Vaughn, C SW NW Sec. 14-24-36.
Location.
Continental Oil Co.'s No. 15-A-3 Vaughn, C NE SE Sec. 15-24-36.
Location.
Continental Oil Co.'s No. 15-A-2 Vaughn, C SW SE Sec. 15-24-36.
Location.
Continental Oil Co.'s No. 22-A-2 Gates, C NW NW Sec. 23-24-36.
Rig.
Continental Oil Co.'s No. 26-A-1 Gates, C SW SW Sec. 26-24-36.
Drlg. 3,444 ft., lime.
Empire G. & F. Co.'s No. 4 Everett, C SW SW Sec. 35-24-36.
T.D. 2,179 ft. in salt and anhy.; W.O.C. 9⅝-in. at 1,542 ft. with 600 sacks.
Humble O. & R. Co.'s No. 1 Coats, C NW NE Sec. 10-24-36.
Drlg. 3,563 ft., lime; D.S. test at 3,532-63 ft.; 5 bbls. oil and 1,000,000 ft. gas per hr.
Humble O. & R. Co.'s No. 2 Coats, SWL NW NE Sec. 10-24-36.
S.D. 3,394 ft.
Simms Oil Co.'s No. 1 Woolworth, C SE NE Sec. 25-24-36.
Drlg. 3,420 ft. in new hole.
Stanolind O. & G. Co.'s No. 4-A Meyers, C NE SW Sec. 22-24-36.
T.D. 3,605 ft.; P.B. to 3,568 ft.; testing.
Texas Co.'s No. 3-B Ogg, C NE NE Sec. 34-24-36.
T.D. 3,673 ft. in lime; P.B. to straighten.
Tide Water Oil Co.'s No. 1 Woolworth, C SW SE Sec. 26-24-36.
Location.

### Jal Area

There were no completions or new locations in the Jal area.

Byrd-Frost, Inc.'s No. 1-A Wells, SE cor. NW Section 12-25-36, is shut down for orders at 3,310 feet in lime. At this depth it encountered a flow of 3,000,000 feet of gas a day. Howard Scott, of Hobbs, a member of the crew, was killed when a valve on the christmas tree was blown out. He was knocked into the cellar and his body was not recovered until some time later. Death is believed to have been instantaneous.

Amerada Pet. Corp.'s No. 1 Dyer, C SW NE Sec. 31-25-37.
Drlg. 2,610 ft. in anhydrite and salt.
Byrd-Frost, Inc.'s No. 1-A Wells, SE SE NW Sec. 12-25-36.
S.D.O. 3,310 ft. in lime; D.S. test at 3,280-90 ft.; showed 3,000,000 ft. of gas.
Byrd-Frost, Inc.'s No. 2-A Wells, SW SW NE Sec. 12-25-36.
Location.
Empire G. & F. Co.'s No. 2 Dyer, NW NW SE Sec. 31-25-37.
T.D. 3,200 ft. in lime; running 7-in.; D.S. test at 3,100-3,200 ft.; showed 40 ft. of mud and 50,000 ft. of gas in 40 min.
E. B. Guess' No. 1-B Justis, SW NW NW Sec. 20-25-37.
S.D. 1,060 ft. in red beds.
Gypsy Oil Co.'s No. 1-B Arnott, NW SW SW Sec. 32-25-37.
S.D.O. at 3,240 ft. in lime; cored oil show at 3,230-40 ft.
Gypsy Oil Co.'s No. 1 Arnott, C NE NW Sec. 2-25-36.
Drlg. 3,377 ft. in lime; T.B.L. at 3,020 ft.; 4¾-in set at 3,374 ft. with 17 sacks.
Gypsy Oil Co.'s No. 2 Arnott, C NW NE Sec. 2-25-36.
Drlg. 3,225 ft. in lime.
Gypsy Oil Co.'s No. 3 Arnott, C NW NW Sec. 2-25-36.
Drlg. 1,974 ft. in salt and anhydrite; 9⅝-in. at 1,338 ft. with 375 sacks.
Gypsy Oil Co.'s No. 1-A Vinson Ramsey, C SE SE Sec. 12-26-36.
Rig.
R. H. Henderson et al's No. 1 Langlie, C SE SE Sec. 8-25-37.
T.D. 2,875 ft.; drlg. by tools.
R. H. Henderson et al's No. 1 Ogg, C NW NE Sec. 11-25-36.
S.D. 5 ft.
Jeffers Oil Co.'s No. 1 Carlson, C NW SE Sec. 27-25-37.
Drlg. 390 ft., lime; wtr. at 350-75 ft.; 12½-in. at 385 ft.
Tide Water Oil Co.'s No. 1 Coats, SE SE NW Sec. 31-25-37.
Drlg. 1,429 ft., salt and anhy.

### Hobbs Area

One completion was reported in the Hobbs Pool, Gypsy Oil Co.'s No. 4 Graham-State, C NW NE Section 24-18-37, near the northwestern edge of the field. It stopped at 4,191 feet, total depth, ran the 3-inch to 4,161 feet and acidized with 1,000 gallons. It flowed for seven hours and in the last hour produced at the rate of 8,745 bbls. of fluid a day, of which 4,110 bbls. was net pipe line oil.

Continental Oil Co.'s No. 13-B-1 State, C SE SW Sec. 13-18-37.
Spudded May 15; set 10¾-in. at 236 ft. with 150 sacks; 7⅝-in. on bottom at 1,615 ft. with 200 sacks.
J. P. Cusack, Inc.'s No. 1 Byers, 666 ft. from N line and 2,310 ft. from E line, Sec. 3-19-38.
Drlg. 2,008 ft. in anhydrite.
J. P. Cusack, Inc.'s No. 1-B Moon, SW SE NE Sec. 28-18-38.
T.D. 4,029 ft., in lime; set 7-in. at 4,020 ft. with 500 sacks; drlg. plug.
National Securities Oil Co.'s No. 1 Linam, NE SE SW Sec. 33-18-37.
T.D. 4,506 ft.; P.B. to 4,238 ft.; S.D.O.
Noble & Co.'s No. 4-C State, 1,315 ft. from W and S lines, Sec. 24-18-37.
Location.
Shell Pet. Corp.'s No. 3 Sanger, SW NW SW Sec. 27-18-37.
Drlg. 2,925 ft. in lime an anhydrite.
Stanolind O. & G. Co.'s No. 26 Byers, C SE NE Sec. 3-19-38.
Drlg. 2,884 ft. in anhydrite.

### Tatum Area

Location for a wildcat in northern Lea County in the Tatum area is reported in the Comanche Drilling Co.'s No. 2 Sloop-Purcell, Section 15-11-36.

### Lea Area

Jeffers Oil Co.'s No. 1 Etz, C NE SW Section 12-21-32, southwest of the Lea Pool, topped the anhydrite at 1,560 feet, set the 10-inch at 1,120 feet, and is waiting after cementing the 8¼-inch on bottom at 1,801 feet, in salt. The elevation is 3,813 feet.

Texas Co.'s No. 1 Cole, C NE NE Sec. 25-19-33.
T.D. 3,618 ft.; U.R. 6⅝-in. at 3,560 ft.
Anderson & Prichard's No. 1 Fisher, C SE NE Sec. 8-20-35.
Drlg. 3,085 ft., anhyd.
Jeffers Oil Co.'s No. 1 Jiminez, C SW SE Sec. 12-20-33.
T.D. 935 ft.; r.b.; U.R. 10-in.; wtr. 740-63 ft. and 780-805 ft.

**CAPROCK AREA**

Vierson & Brown's No. 1 Robinson, C NW SE Sec. 14-11s-32.
Standing; rig completed.

### Nadine Area

Repollo Oil Co.'s No. 1 Arnold, SW NW SE Section 11-20-38, a wildcat south of the Hobbs Pool, has failed to improve with deeper drilling and probably will be abandoned. Total depth is 4,757 feet. Drill stem test at 4,348-4,757 feet showed 750 feet of fluid, of which 300 feet was sulphur water, in two hours. Will make Schlumberger test.

### Maljamar Area

An important extension of the Maljamar Pool is indicated in Maljamar Oil & Gas Co.'s No. 1 Miller, C NW SW Section 23-17-32, which had oil standing within 200 feet of the top when it stopped drilling at 3,985 feet to erect tankage. It had an increase in gas at 3,929-30 feet. Elevation is 3,992 feet. It is 1 mile southeast of its No. 4 Baish, NE SE NE Section 21-17-32, which was completed a year ago at 4,093 feet for 210 bbls. the first 24 hours.

### Eddy County

Tignor, Etz & Keyes' No. 1 State, C NE NW Section 15-17-28, Artesia area, was plugged and abandoned at 2,035 feet, total depth. It had a show of oil and gas at 1,838-55 feet. Elevation is 3,536 feet. Same firm's No. 2 Keyes, C NE SW Section 10-17-28, is a location.

Fred Brainard's No. 1 fee, E NW NE Section 2-17-28, was plugged and abandoned at 2,070 feet. It had a gas show at 1,553-57 feet, and an oil show at 1,587-91 feet. The elevation is 3,040 feet.

Flynn, Welch & Yates' No. 70 State, C SW NW Section 27-18-28, which has been standing at 350 feet in the red beds since last fall, is suspended indefinitely.

Barnsdall Oil Corp.'s No. 2 Dodd, C NE SE Sec. 22-17-29.
Drlg. 2,540 ft., lime; oil show 2,450-56 ft.; 6⅝-in. 2,212 ft.; 60 sacks.
R. D. Compton et al's No. 6 Mann, NW SW NE Sec. 4-18-27.
S.D. 648 ft.
Dooley & Shank's No. 1 McClay, C NE SE Sec. 33-18-30.
Drlg. 340 ft.; 10-in. 480 ft. with 50 sacks; H.F.W. at 840 ft.
Dooley et al's No. 1 Commerce Trust, NW NE SW Sec. 8-20-27.
Drlg. 450 ft., shale and sand.
Flynn, Welch & Yates' No. 1 Yates, C SE NE Sec. 6-20-27.
Drlg. 345 ft., gray lime.
Getty Oil Co.'s No. 7 Dooley, SW SW NW Sec. 24-20-29.
S.D. 5,108 ft. for repairs.
Rampo Oil Co.'s No. 1 State, CNL NE SE Sec. 32-17-28.
Drlg. 1,770 ft., gray lime.
Red Lake Oil Co.'s No. 4 State, NW NW SW Sec. 22-17-28.
Drlg. 1,980 ft., white lime.

**OTERO COUNTY**

Flynn, Welch & Yates' No. 1 Donahue, C NW NE Sec. 28-24-15.
Drlg. 1,255 ft., lime.

**QUAY COUNTY**

Quay County Dev. Co.'s No. 1, C SE SW Sec. 19-9n-33e.
Drlg. 450 ft.

**SANTA FE COUNTY**

Holmberg Interests' No. 1 Cantwell, NW NW NW Sec. 5-10n-9e.
Drlg. 2,570 ft.

**VALENCIA COUNTY**

Pres-Sel Dev. Co.'s No. 1 Morris, NE SE Sec. 30-12n-10w.
Drlg. 600 ft.

## COLORADO

There were no completions reported in Colorado. Two new locations were released, both on the Iles Dome in Moffat County, one by Texas Co. for No. 2 Iles Investment Co., Lot 4, Section 23-4n-92, which is pouring derrick foundations and building rig, and Stanolind Oil & Gas Co.'s No. 5-S Parkinson, NW NW SE Section 22-4n-92.

Indian Territory Illuminating Oil Co.'s geophysical party in eastern Colorado is shooting in Townships 2 and 3s, Range 51w, Washington County, and Colorado Geophysical Corp. is shooting in Township 10s, Range 46w, Kiowa County. The Indian Territory company has a core-drill party working on the boundary between Kiowa and Prowers Counties in Townships 20 and 21s, Range 47w. Ohio Oil Co.'s party is shooting in Townships 18 and 19s, Range 52w, and Townships 19 and 20s, Range 53w, Kiowa County. Colorado Geophysical Corp. also has a party shooting in Township 4s, Range 45w, Yuma County.

**ADAMS COUNTY**

Riddle Pet. Co.'s No. 1 Baxter, C SW Sec. 2-3s-66w.
Standing partially rigged and drlg. wtr. well.

**ARCHULETA COUNTY**

Oil City Pet. Co.'s No. 1-A Garnett, NW NE SW Sec. 25-33n-2e.
Resuming at 1,090 ft.

**BACA COUNTY**

J. H. Everett et al's No. 1, 330 ft., NW cor. Sec. 24-32-48.
Drlg. wtr. well and moving in rotary equipment.

**BOULDER COUNTY**

Leslie R. Steele et al's No. 1 Maxwell, SW NE NW Sec. 24-1n-71.
T.D. 925 ft.; straightening hole.

**GRAND COUNTY**

Colorado Oil Ref. Co.'s No. 1 Linke, NE SW SW Sec. 13-1n-77w.
Drlg. below 1,320 ft.
Interstate O. & R. Co.'s No. 1 Hinman, NE SE NW Sec. 11-2n-81.
S.D. 1,997 ft.

**HUERFANO COUNTY**

S. W. Pressey's No. 1 Ojo, SW NE Sec. 10-29-69.
S.D. 2,550 ft.

**JACKSON COUNTY**

Colorado Oil Ref. Co.'s No. 1 North Park Coal, NW NW Sec. 18-9n-78.
Resuming at 1,805 ft. after completing wtr. well.
Continental Oil Co.'s No. 3 Hoye, NW NW NE Sec. 34-9n-78.
T.D. 2,490 ft.; P.B. to 2,330 ft. to straighten.

**JEFFERSON COUNTY**

Ruby Hill Oil & Gas Co.'s No. 1 Braden, SE cor. Sec. 24-4s-69.
S.D. 4,280 ft.

**LAS ANIMAS COUNTY**

Mountain States Oil Corp.'s No. 1 Nikola, C NE SE Sec. 10-34-62.
S.D. 1,640 ft.

**LINCOLN COUNTY**

Consolidated Smelting & Metals Co.'s No. 1 Hancock, NE NE SW Sec. 7-17s-52.
T.D. 1,190 ft.; cleaning out.

**MOFFAT COUNTY**

Stanolind Oil & Gas Co.'s No. 5-S Parkinson, NW cor. SE Sec. 22-4n-92.
Location.
Stanolind Oil & Gas Co.'s No. 16-SD Shaw, SE NW NW Sec. 27-4n-92.
Drlg. 2,840 ft.; top Dakota, 2,748 ft.
Texas Co.'s No. 2 Iles Investment, 620 ft. S of N line and 220 ft. E of W line, Lot 4, Sec. 23-4n-92.
Bldg. rig and pouring derrick foundations.
Mountain Fuel Supply Co.'s No. 1 Murdock, SE SE NE Sec. 24-12n-101.
Some materials on location.

**MONTEZUMA COUNTY**

McElmo Oil Co.'s No. 1 West, NE NW NE Sec. 31-36n-17w.
S.D. 3,131 ft. with 1,200 ft. oil in hole.

**PARK COUNTY**

South Park Oil Co.'s No. 1 State, SE SE SW Sec. 16-11s-75.
T.D. 1,415 ft.; U.R. to bottom and trying to land 10-in.

**PROWERS COUNTY**

Trojan Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Sec. 15-23-46.
Drlg. below 5,227 ft.

**PUEBLO COUNTY**

Hooker-Hill Syndicate's No. 1 Hartman, NW cor. Sec. 31-22-61.
S.D. 400 ft.

## WYOMING

### Albany County

California Co.'s No. 1 Holst, NE SE SE Section 13-17-77, discovery well on the Quely Dome, has finished a 10-day pumping test at 3,256 feet, total depth, and averaged 600 bbls. a day, the actual gauge on the last day being 575 bbls. The pay is in the Dakota sand topped at 3,231 feet. This test also produced 60 bbls. a day in the Muddy sand at 3,146-75 feet last December, after which operations were suspended until spring when the test was deepened and found additional production in the next sand.

### Big Horn County

California Exploration Co.'s No. 1 Gafner, C SW SW Section 4-54-94, Spence district, was plugged and abandoned at 1,500 feet, total depth. It plugged back and tested a show at 800-835 feet, not commercial. The test started in the Embar, of Pennsylvanian age and had the Madison lime as the objective.

Ohio Oil Co. released a location on the Byron Dome in its No. 4 Byron Union, SW NE Section 22-56-97.

Peay Oil Co., which recently brought in a light oil producer in No. 1 Denio, Tract 43-C, Section 15-55-97, in a fault block south of the Garland Dome, has contracted the output to Yale Oil Corp. at Billings, Mont. The oil which tests 48 gravity, will be run in the company's refinery at Billings. Contract, which runs for one year, is reported to be $1.40 per barrel. The well actually made 210 bbls. a day on a five-day test, but has not yet been completed. Total depth is 3,225 feet.

J. W. Bales' No. 1 Parker, C SW SW Sec. 23-49-89.
S.D. 125 ft.
Peter Evanoff's No. 1 Griffin, Lot 60, Sec. 4-55-97.
S.D. 1,594 ft.
Peter Evanoff's No. 2 Griffin, Lot 53, Sec. 28-55-97.
Rig.
Peter Evanoff, et al's No. 1 McAllister, Lot 40, Sec. 2-55-97.
Rigged.
Ohio Oil Co.'s No. 2 Sidon Canal, C SW SW Sec. 24-56-97.
Drlg. 3,495 ft. in shale.
Ohio Oil Co.'s No. 3 Byron Union, SE NW NE Sec. 22-56-97.
Rigging up rotary.
Ohio Oil Co.'s No. 4 Byron Union, SW NE Sec. 22-56-97.
Cellar.
Taylor Oil Co.'s No. 1 Hoskins, Lot 5 (SE SE) Sec. 25-56-97.
T.D. 5,275 ft.; redrlg. at 4,850 ft.
Wyoming Oil & Refining Co.'s No. 1 Evans, NE NE NW Sec. 12-49-91.
Drlg. 215 ft.
Yale Oil Corp.'s No. 1 Blakesley, NE NW Sec. 28-49-91.
S.D. 1,425 ft.

### Carbon County

Ohio Oil Co.'s No. 10 Harrison & Cooper, NE NW SW Section 35-20-78, Rock Creek Field, an old producer in the Muddy sand deepened as a test to the Sundance, and the discovery well in the last named formation, has not yet been tested after cutting the first Sundance at 3,061-3,196 feet, in which it cored 88 feet of saturation. It is waiting after cementing 6¼-inch liner on top of the sand at 3,060 feet.

Ohio Oil Co.'s No. 4 Diamond Cattle, SE SW NW Sec. 35-20-78.
Rigging up.
Earl W. Reeder, Inc.'s No. 1 Whitford, SW SE SE Sec. 24-20-84.
T.D. 4,365 ft.; fshg. for bailer.
Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Sec. 19-20-83.
S.D. 5,931 ft.; may deepen.

**CONVERSE COUNTY**

Chadron-Osage Oil Co.'s No. 1 State, SW cor. Sec. 16-32-69.
T.D. 450 ft.; fshg. for casing.
Continental Oil Co.'s No. 9 Whiteside 3,680 ft. S of N line and 1,072 ft. W of E line, Sec. 7-33-76.
Digging pits.
Otto Olston, et al's No. 1 Carey, Sec. 6-32-74.
S.D. 642 ft.
John Ackard's No. 1 Daniels, SW SW SE Sec. 17-32-71.
Drlg. below 2,600 ft.

**FREMONT COUNTY**

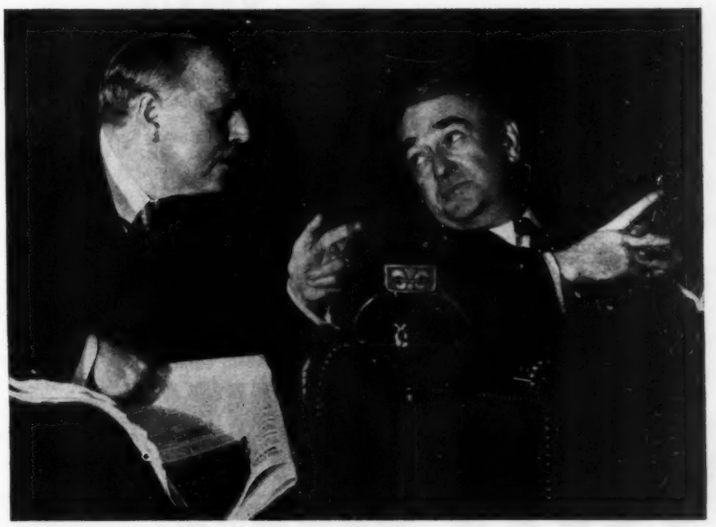
Mid-American Oil Co.'s No. 3 Government, NW NE SW Sec. 14-28-92.
Rigging.
Monongahela Oil Co.'s No. 1 Wisda, NE SE SE Sec. 13-28-93.
T.D. 2,970 ft.; rigged and ready to resume.
Tropic Oil Co.'s No. 1 Government, C SE SW Sec. 34-27-90.
Drlg. 2,701 ft.

**HOT SPRINGS COUNTY**

Argo Oil Co.'s No. 16 Ellen, NE SE NW Sec. 14-44-98.
Drlg. 200 ft.; 12½-in. at 170 ft.

### Niobrara County

Ohio Oil Co. has another good well in

**"Man—that was a real test for Larkin Float Collars!"**

Two Larkin 7" OD Float Collars with Bakelite Valves were put to an hydraulic test by the Southwestern Laboratories recently. The test was witnessed by the engineers of three major oil companies.

One Float Collar withstood 5000 lbs. pressure per sq. in., the other 5500 lbs. The report says: "Both float collars leaked slightly but not enough to prevent the pressure being carried higher had the plant's set-up been capable of handling a higher pressure. None of the valves were damaged by the test."

In Larkin Bakelite Float Collars and Shoes, with 7 sq. in. of opening through both the valve and guide, it's practically impossible to clog up the main channel. Specify "LARKIN"!

At All Supply Stores
Warehouse stock at Houston, Texas, Tulsa, Okla., and in East Texas.

LARKIN PACKER COMPANY, ST. LOUIS

LARKIN PACKER CO.

the Sundance formation in the Lance Creek Field in its No. 6 Lamb, near C SE SE Section 32-36-65, which may equal its No. 2 Rohlf, near the center of the 40 on the north, completed two months ago for 5,000 bbls. initial. No. 6 Lamb was drilled to 3,904 feet, in the top of the red beds. A drill stem test at 3,858-95 feet, in the fourth sand in the third bench of the Sundance, and showed for 65 bbls. in 55 minutes. A test at 3,789-3,832 feet in the third sand in the second bench, showed for 100 bbls. an hour. It cemented 7-inch at 3,791 feet and is waiting.

Argo Oil Co.'s No. 3 Elliott, C NE NE Sec. 4-35-65.
Drlg. 3,275 ft.

Black Hills Ref. Co.'s No. 1 Wright, SE SE SW Sec. 22-36-64.
Moving in rotary equipment.

Continental Oil Co.'s No. 2 Schuricht, C SE NE Sec. 6-35-65.
Rigging.

Continental Oil Co.'s No. 1 Apex-3, SW NE Sec. 34-36-65.
T.D. 3,538 ft.; cmtd. back to 3,444 ft. to sidetrack bailer

Interstate Oil & Ref. Co.'s No. 1 Morrell, NW NE SE Sec. 2-39-61.
S.D. 3,030 ft.

Fall River Royalty & Producers Co.'s No. 3-L, CEL NE NE Sec. 2-39-61.
Drlg. 300 ft.

**PARK COUNTY**

George T. Beck's No. 1 fee, NW SE NW Sec. 27-51-101.
Resuming at 1,181 ft.

Continental Oil Co.'s No. 3 Northern Pacific, NW SE SE Sec. 23-58-98.
Rigging up.

Garland Oil Co.'s No. 2 Government, SE NE NW Sec. 14-56-98.
S. D. 3,166 ft.

Resolute Oil Co.'s No. 1 State, C NW SW Sec. 16-57-101.
S.D. 3,608 ft.

Texas Co.'s No. 3 Ora Sonners, 660 ft. N of S line and 590 ft. W of E line, NE NW Sec. 29-51-100.
Coring at 3,449 ft.

**SHERIDAN COUNTY**

Beaver Creek Oil Syndicate's No. 1 Allison, SW SE Sec. 15-55-85.
S.D. 2,660 ft.

**SUBLET COUNTY**

California Petroleum Corp.'s No. 4-K, SW SE SW Sec. 34-27n-113.
Comp. below 824 ft., but not yet tested.

Piney-La Barge Oil Co.'s No. 2 Government, CEL NE NW Sec. 18-28-113.
Drlg. below 520 ft.

**SWEETWATER COUNTY**

Mountain Fuel Supply Co.'s No. 1 Joseph Brooks, C NW NE Sec. 15-16-104.
Rig up.

Vermillion Oil Co.'s No. 1 State, SW cor. Sec. 16-12n-99.
S.D. 4,685 ft.

Wyoming-California Pet. Co.'s No. 1 Government, SE cor. Sec. 20-16-104.
Location.

**WASHAKIE COUNTY**

C. L. Brome et al's No. 3 Government, SW NW NW Sec. 31-48-90.
Drlg. 1,100 ft.

Chris Oil Syndicate's No. 1 Government, C SW SW Sec. 31-48-90.
T.D. 1,830 ft.; fshg. for tools.

Wyoming Oil & Ref. Co.'s No. 1 Frison, NW SW NW Sec. 14-48-91.
Drlg. 1,600 ft.

ALLEGHENY STEEL PIPE SERVICE

Convenient warehouse stocks ...prompt shipments ... careful handling ... wire-traced delivery ... Allegheny, the quality pipe for oil field casing, tubing and line pipe.

ALLEGHENY STEEL CO.
BRACKENRIDGE, PA.
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ALLEGHENY PRODUCTS:
SHEETS FOR AUTOMOBILE BODIES, METALLIC FURNITURE, DEEP DRAWING—ALLEGHENY METAL—ALLEGHENY ALLOYS—ELECTRICAL SHEETS—STEEL CASTINGS—SEAMLESS TUBING—BOILER TUBES—PIPE.


**WESTON COUNTY**

Conway Oil Corp.'s No. 1 Government, C SE NW Sec. 7-41-60.
S.D. 800 ft.

Carl Cundy's No. 9 Government, NW cor. NE Sec. 21-46-63.
Rigging.

F. J. Diiger & Son's No. 1 Thierry, NW NW SW Sec. 22-46-63.
Rigged and ready to spud.

La Fleishe Oil Co.'s No. 13 fee, C SW SW Sec. 17-46-63.
S.D. 360 ft. for casing.

## MONTANA

**CARBON COUNTY**

Ohio Oil Co.'s No. 15 Montana Industrial, C NE NE Sec. 11-7s-21.
Drlg. 2,557 ft. in shale.

### Glacier County

Two completions and two new locations were reported in the Cut Bank Field. Dakota-Montana Oil Co.'s No. 2 Winkler, CEL NE NW Section 26-35-6w, in the northwestern part of the field, completed at 2,890 feet in the pay at 2,840-85 feet, flowed and swabbed 260 bbls. the first 24 hours.

Texas Co.'s No. 1 Sherburne Mercantile Co., C NW SW Section 10-34-6w, near the western edge of the development in the northwestern part of the field, was completed at 2,982 feet in the pay at 2,948-66 feet and swabbed 58 bbls. first 24 hours.

Texas Co.'s No. 1 Marie Hagerty, C SE NE Section 9-34-6w, a west offset to its No. 1 Sherburne Mercantile Co., is moving in rotary equipment. The other location is the Santa Rita Oil & Gas Co.'s 1 Fisk, C SW SE Section 14-35-6w, an inside well.

Texas Co. has about completed the unitization of a large block in the Valier area, 15 miles southeast of the Cut Bank Pool, six units in the block. It is doing some core-drilling to work out the trend of the seacoast line in which the Cut Bank production is found. First of the several core holes is being put down in the SE NE SE Section 5-30-5w.

Askins' No. 1 Askins, Lot 24, Blk. 33, Sec. 12-33-6w.
T.D. 2,700 ft.; fshg. for casing. Still 1,000 ft. 8-in. in hole.

Consolidated Gas Co.'s No. 5 Tribal, Lot 5, Sec. 3-34-6w.
Drlg. 2,755 ft.

Consolidated Gas Co.'s No. 6 Tribal, C SW SW Sec. 10-34-6w.
Drlg. 2,585 ft.

Gardner-Smith's No. 1 Tweedy, Lot 1, NE NE Sec. 36-33-6w.
Drlg. 2,500 ft.

L. R. Hannah, trustee's No. 1 State, Lot 5, Blk. 4, Sec. 12-33-6w.
Drlg. 2,500 ft.

Indian Oil Co.'s No. 2 Winkler, W SW SW Sec. 23-35-6w.
Drlg. 2,735 ft.

R. C. Jeffries' No. 2 Lukens, NE cor. Sec. 12-33-6w.
Drlg. 2,025 ft.

Kately-Drumheller's No. 2 Ward, SE NE Sec. 10-34-6w.
Drlg. 1,700 ft.

Kately's No. 1 Thronson, SW NW SW Sec. 25-35-6w.
Drlg. 350 ft.

Montana Power Gas Co.'s No. 1 Bonnett, C SE NW Sec. 4-32-5w.
Drlg. 1,000 ft.

Montana Power Gas Co.'s No. 1 Holland Unit, NW SE NW Sec. 27-36-5w.
Drlg. 2,850 ft.; probably dry.

Montana Power Gas Co.'s No. 1 Lookhoff, C SW SE Sec. 28-33-5w.
Drlg. 2,260 ft.

Montana Power Gas Co.'s No. 1 Miller, C NW NW Sec. 28-33-5w.
Cmtd. 6⅝-in. on bottom at 2,990 ft. with 40 sacks. Good show oil and gas.

Nadeau Brothers' No. 2 Coover, C NE NE Sec. 17-33-5w.
Drlg. 1,970 ft.

Nadeau Brothers' No. 4 Van de Mar, C SW NE Sec. 25-35-6w.
Drlg. 2,060 ft.

Santa Rita Oil & Gas Co.'s No. 1 Government, C NE SW Sec. 4-32-6w.
Top Colo. 700 ft.; 12½-in. at 722 ft.; 50 sacks.

Santa Rita Oil & Gas Co.'s No. 1 McCabe, C NW SW Sec. 28-33-5w.
Drlg. 800 ft.

Santa Rita Oil & Gas Co.'s No. 1 Ritchie, C NW SW Sec. 5-32-5w.
Drlg. 2,694 ft.

Santa Rita Oil & Gas Co.'s No. 2 Ritchie, C NE NE Sec. 6-32-5w.
Drlg. 2,200 ft.

Santa Rita Oil & Gas Co.'s No. 1 Fisk, C SW SE Sec. 14-35-6w.
Location.

Santa Rita Oil & Gas Co.'s No. 5 Whetstone, NE SE Sec. 22-35-6w.
Drlg. 2,675 ft.

Steele Creek Producers, Inc.'s No. 2 Carman, C SW NW Sec. 19-34-5w.
Drlg. 2,220 ft.

R. C. Tarrant's No. 2 Getty, NW NW SE Sec. 2-34-6w.
S.D. 2,700 ft.

R. C. Tarrant's No. 4 Britton, C SW SW Sec. 12-34-6w.
Rig on location.

R. C. Tarrant's No. 6 Haglund, Jr., C SE NW Sec. 13-34-6w.
Rig on location.

R. C. Tarrant's No. 1 O'Brien, C SE SW Sec. 29-34-5w.
Location.

R. C. Tarrant's No. 1 fee, C NW SE Sec. 12-34-6w.
Rig on location.

R. C. Tarrant's No. 1 Ruetten-Wold, C NW NE Sec. 13-34-6w.
Drlg. 660 ft.

Texas Co.'s No. 1 Aarronson et al, C N half SE Sec. 21-35-6w.
Drlg. 2,230 ft.

Texas Co.'s No. 1 Marie Hagerty, C SE NE Sec. 9-34-6w.
Moving in rotary equipment.

Texas Co.'s No. 2 Morrison, Lot 7, Sec. 22-35-6w.
Cmtd. 7-in. on bottom at 2,858 ft.

**LIBERTY COUNTY**

J. H. Hamilton et al's No. 1 Northern Farms, C NE SW Sec. 10-37-5e.
T.D. 2,660 ft.; fshg. U.R. lug.

**TOOLE COUNTY**

A. E. Crumley's No. 5 Shaw, NW SE SW Sec. 35-36-2w.
Drlg. 1,700 ft. 4 bbls. oil in Sunburst at 1,570-87 ft.

E. B. Coolidge's No. 1 Shaw, SW SE NE Sec. 35-36-2w.
Drlg. 210 ft.

P. L. Eddy's No. 5 Seabrook, NE SW SW Sec. 19-35-2w.
Location.

Fraser & Kluth's No. 1 Severance, C SE NE Sec. 29-32-2e.
Running 8¼-in. at 1,020 ft.

Graham Oil Co.'s No. 2 McDonald, E SE SW Sec. 19-35-2w.
Rigging up.

Imperial Oil Co.'s No. 5 Craig, C NE NE Sec. 19-35-1w.
Drlg. 400 ft.

Monopeg Oils, Ltd.'s No. 3 Dipple, S SW NW Sec. 28-35-1w.
Fshg. at 1,355 ft.

Mon-Tex Petroleum Co.'s No. 1 fee, SE NW Sec. 27-34-1w.
Rigging.

Nepstead-Vanderpas' No. 19 Government, SE NW Sec. 33-35-2w.
Location.

New Era Fuel Co.'s No. 7 Lorensen, CNL NW NE Sec. 27-35-2w.
Drlg. 400 ft.

C. T. Oien's No. 1 Engermoen, SW SW NW Sec. 14-35-2w.
Drlg. 280 ft.

E. O. Reickhoff's No. 2 Government, SW SW NE Sec. 3-35-3w.
Drlg. 400 ft.

Pfabe & Engleking's No. 8 Seabrook, SE SW SE Sec. 19-35-2w.
Drlg. 400 ft.

Texas Co.'s No. 9 Bruins, C SE Sec. 9-35-2w.
Drlg. 840 ft.

## Eastern Fields

(Continued from Page 72)

and 171 feet on the T. J. Ireland farm. W. H. Mosser is down 735 feet on the G. L. Goff farm, a test. In Clay district, H. N. Rinehart and others are drilling at 1,800 feet on the A. J. Glass farm, No. 2. Glen McBurney and others have a location on the D. L. Barker farm. Mahone and others have a location on the Thomas Murray farm. McGinnis & Lemon are drilling at 1,680 feet on the John Kelley farm, a test. Richards Farm Oil Co. is down 900 feet on the Corlie Ball No. 7. In Grant district, Ralph Jackson is drilling at 1,580 feet on the S. and L. Tennant farm.

In Roane County, Spencer Natural Gas Co. is down 1,700 feet on the J. D. Young farm in Smithfield district. In Spencer district, D. S. Fisher is drilling at 1,880 feet on the Stella Knotts farm, No. 3. In Curtis district, Reedy Oil & Gas Co. is drilling at 1,100 feet on the L. M. Riddle No. 7 and 1,250 feet on the Alfred Moore farm. H. H. Staats and others are rigging up on the R. R. Petty farm.

In Wirt County, Glen Roberts and others are down 1,930 feet on the D. S. Holbert farm in Burning Springs district. In Wetzel County, C. B. Lewis and others are building a rig on the D. Dappler heirs farm in Proctor district. This operator shut down for cable on the S. O. Adams farm at 2,980 feet. The Pittsburgh Coal was at 1,106 feet. In Center district, Chambers Oil & Gas Co. has part of the tools on the ground for No. 2 on the Harrison Melott farm.

### J. W. McCAMEY KILLED

FORT WORTH, Tex., June 3.—James W. McCamey, driller, Fort Worth, and cousin of George B. McCamey, head of the Cordova Union Oil Co. of Fort Worth, was killed in an automobile accident northwest of Denton, Tex., on May 28.

# TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to sumbit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

## Volatility Index Designates the Usefulness of Motor Fuel

**What is the meaning or use made of volatility index? If I am not mistaken, volatility index is a ratio of two points on the Engler distillation curve. I would like to know the actual points used and the exact manner of calculating the volatility index. What is volatility index 90 to 100?—R. A. S.**

The one outstanding characteristic of gasoline that adapts it for use in the internal combustion engine, is the fact that at relatively low temperatures it changes completely into a vapor which readily mixes with air to produce an explosive mixture. The starting and warming-up periods of the engine to be satisfactory required that the fuel shall begin to vaporize at or very close to the atmospheric temperature. The accepted method for judging this property is by the distillation test and the rate of distillation shown by temperature is termed volatility. The first half distilling over representing the utilizable part needed for easy starting and getting the car under way. Any way of expressing volatility of a motor fuel is a method for indicating the utilitarian value. The volatility index is intended to do this.

Volatility index was first proposed some years ago by Oberfell and Alden and defined by them as relating to the distillation temperature at the 50 per cent point, or 284° F., stipulated in the specification for U. S. Government Motor gasoline. A volatility index of zero would mean that the product distilled 50 at 284° F. The volatility index of a motor gasoline is derived by subtracting the temperature, in degrees Fahrenheit, at the 50 per cent recovery point, as determined by the standard distillation test, from 284° F. A volatility index of 90 to 100 would therefore be obtained in any gasoline having a 50 per cent distillation recovery between 184 and 194° F.

## Whale Oil Production Today Is More Than Ten Years Ago

**What is the condition of the whale oil industry at the present time as compared with 10 years ago? How many whales are caught per year and what is the oil production? Does the petroleum industry make any use of this oil?—P.M.G.**

It appears that the whale industry today is, according to the number of whales caught, about three times the size it was 10 years ago. The data presented in the table are from Bulletin des Matieres Grasses, March, 1935, page 57.

In a subsequent note on the production of whale oil during the 1934-1935 season by M. B. Bjelke, it is mentioned that the season just ending will show a production from the South and Antarctic Seas of about 2,400,000 bbls., not including some of the oil from Japanese and South American sources.

The manufacture of the oil was less than 40 bbls. per whale in 1920 and has increased to approximately 93 bbls. for 1933.

Some whale oil is consumed in making compounded lubricating oils and it is also used in the preparation of some greases.

**WORLD PRODUCTION OF WHALE OIL**

Barrels 374 pounds each

| Year— | No. whales caught | Ant-arctic | Arctic | Africa | North Pacific | Japan | Total oil in barrels |
|---|---|---|---|---|---|---|---|
| 1920 | 11,369 | 5,441 | 1,456 | 1,310 | 1,763 | 1,279 | 407,227 |
| 1921 | 12,174 | 8,448 | 310 | 1,263 | 129 | 1,487 | 471,141 |
| 1922 | 13,940 | 7,023 | 918 | 2,235 | 1,356 | 1,506 | 539,276 |
| 1923 | 18,120 | 9,910 | 1,204 | 3,105 | 1,362 | 1,422 | 817,314 |
| 1924 | 16,839 | 7,371 | 1,667 | 3,649 | 1,102 | 1,526 | 716,246 |
| 1925 | 28,252 | 10,488 | 1,523 | 4,384 | 1,892 | 1,875 | 1,040,408 |
| 1926 | 28,193 | 14,219 | 1,588 | 4,646 | 1,804 | 2,148 | 1,153,536 |
| 1927 | 24,175 | 12,665 | 1,403 | 4,144 | 2,064 | 1,546 | 1,191,922 |
| 1928 | 23,534 | 13,775 | 1,561 | 3,835 | 1,412 | 1,607 | 1,321,313 |
| 1929 | 27,896 | 20,241 | 1,159 | 3,262 | 1,241 | 1,463 | 1,886,082 |
| 1930 | 37,674 | 30,167 | 1,472 | 3,498 | 975 | 1,312 | 2,799,042 |
| 1931 | 42,874 | 40,201 | 703 | 823 | .... | 1,147 | 3,686,976 |
| 1932 | 12,797 | 9,572 | 827 | 1,043 | 319 | 1,036 | 915,842 |
| 1933 | 28,668 | 24,327 | 1,357 | 1,168 | 591 | 1,325 | 2,596,778 |

## Zinc Coated Iron Corrodes to Form Insoluble Deposit

**It appears that gasoline contaminated with moisture in contact with galvanized surfaces brings about the formation of a hard white insoluble substance which clogs strainers and otherwise causes trouble. Have you any information bearing on the nature of this type of corrosion? We understand a chromate preparation may be applied to such surfaces to prevent these reactions.—R. F. C.**

The deposit is probably some form of zinc. Most of the ordinary salts of zinc are white.

Zinc-coated iron stands up very well under normal atmospheric conditions but the zinc is quite easily removed when subjected to treatment with the common acids and salts in the presence of water. The usual acids derived from gasoline that is in contact with water are those of sulphur, especially sulphuric. Sometimes the carbonates and bicarbonates of zinc are formed. The alkalies act on zinc to form the hydroxide, but an alkaline solution strong enough to dissolve zinc is not to be expected to be found in a gasoline tank. In all areas close to the ocean, and especially your locality, the atmosphere is frequently laden with salt, sodium chloride. Such a condition is favorable to the formation of the zinc chloride. These different sources to the corrosion of zinc covered iron are mentioned for the purpose of directing attention to the possibilities.

Since the material mentioned appears to be insoluble in water, it may be either the carbonate or the sulphide. The conditions are more favorable to the sulphide than the carbonate, because small quantities of hydrogen sulphide are frequently found in water held in oil storage tanks. If the gasoline contained excessive sulphur, more than 0.1 per cent, especially in a form easily changed under the existing conditions to hydrogen sulphide, the presence of the insoluble material may be accounted for quite easily. This would produce a condition favorable to the formation of zinc sulphide.

The application of a corrosion inhibitor, such as a chromate, is made in the form of a grease or paste to metallic objects, iron and steel, that are not in service and is not suitable for zinc.

The problem may be taken care of by the use of steel tanks and iron pipe. Water should be kept out of the system.

## Heat Test for Determining Type or Purity of Lubricating Oil

**What is the heat test which is used in the examination of lubricating oils and what is the purpose of the test? —R. O.**

The Heat Test was in use some years ago as a method for determining the purity, stability or type of a lubricating oil, but is seldom used today.

One method was to heat the oil until colored vapors, while or yellowish, appeared at the surface, then hold the oil at this temperature for 15 minutes. Set aside to cool. A good, well refined oil will darken in color but will be clear. A poor oil will frequently become jet black and after 24 hours' standing will show an appreciable deposit of black material.

A modification of this test was to heat some of the oil, about 10 c.c., in a small flask on a hot plate for 10 minutes alongside of another oil of similar quality but of known origin and refinery treatment. This test was used as an indication of whether the unknown oil had been filtered for color or had been acid treated. If the color of the unknown holds fairly well with a filtered sample, it is graded as "filtered oil." If the unknown lost color rapidly it was graded as "acid treated oil."

A more severe method was to record the color of the oil before and after heating at some selected temperature, usually between 200° and 400° F., for a set time, which varied from one to six hours. The results were interpreted as indicated above.

The Flock Test was sometimes known as the Heat Test. This test required that 500 c.c. of oil should be slowly heated in a flask to 250° F., the time required to bring it to this temperature should be about two hours, and held there for six hours. When examined, while hot, small particles moving about in the oil are called flock. If none of these is present the oil is reported as No. 1, if a few, it is graded No. 2 and if a large number, No. 3. This was considered to be a stability test.

These tests are considered for testing purposes to be obsolete. For Standard Methods for the examination of lubricating oils and other petroleum products see A.S.T.M. Standards on Petroleum Products and Lubricants, by American Society for Testing Materials.

## Octane Rating of Gasoline Need Not Be Related to Lead Content

**Does the octane number of one Ethyl Gasoline indicate the number of c.c. of lead contained? What is the technical meaning of the octane number in regard to motor fuels? If I have one order specifying gasoline 87 octane is there one and only one Ethyl Gasoline that accomplishes such requirements?—M. A.**

The octane number of a motor fuel need not in any way be related to lead content. A gasoline, for example, may be rated at 70 octane number but contain no lead or any other knock inhibitor. The octane number is simply a means for expressing the antiknock value of gasoline or a motor fuel. It is a relative value obtained by trial in a standardized motor which is operated in a prescribed manner. Several blends of known composition, that is, containing different quantities of octain and heptane are prepared. The sample to be tested is used in the engine alternately against the blends until a match is obtained. If, for example, a sample of gasoline knocks in the test to the same degree as a blend containing 70 per cent octane and 30 per cent heptane, the product is said to have a knock rating of 70 octane number.

Since octane numbers indicate only knock rating there is not necessarily a relation to ethyl lead or any other knock suppressor. A gasoline of 78 octane number may be made in the refinery without the addition of any substance, consequently contain no lead, but the Ethyl Gasolines now marketed, showing a 78 octane number rating (A.S.T.M. method), may contain ethyl fluid in quantities ranging between 0.9 to 3 cc. per gallon; the lower limit being the minimum permitted by contract, and the upper, the maximum quantity that is allowed by the U. S. Bureau of Public Health, to be present in motor gasoline.

Any gasoline showing an antiknock rating of 87 octane number would satisfy the specification as to octane value. However, such an item is probably a detail of specification for aviation gasoline, which would include requirements covering freezing point, distillation range, vapor pressure, sulphur, etc.

# NATURAL GAS DEVELOPMENTS

## Conservation of Natural Gas Reserves in Production and Transmission

By H. A. WALLACE
President, Charleston Group, Columbia Gas & Electric Corp.*

The need of natural gas reserves for any utility serving this commodity can scarcely be questioned and certainly requires no argument for justification to members of this association. The amount of gas reserves that any producing utility should have is subject to more or less discussion, and is dependent upon factors and conditions peculiar to each case and which may vary the needed reserves that could be justified.

Gas reserves as referred to here include long term purchase contracts as well as the utilities' own fee interests and leases in accessible probable productive territory.

It is evident that those companies having or anticipating large investments in plant and equipment should have proportionately large gas reserves. This will assure long life to the property and maintain yearly amortization and retirement charges at such reasonable figures as will allow the product to compete with other fuels and be marketed in sufficient volume to yield a return on the investment.

Reserves in noncompetitive fields may be smaller than those in fields where keen competition exists and no opportunity would later be afforded to obtain additional territory on reasonable terms. Some companies may be so situated that part of their natural gas equipment may finally be utilized for transmission and distribution of mixed gas, and later, after the natural gas has been depleted, straight artificial gas. This ideal condition would extend the useful life of their plants and reduce expenditures that might be required for reserves.

### Reserves and Financing

Certain public service commission rulings and court decisions have recently questioned or refused to permit such sufficient allowance for gas reserves to be placed in rate case valuations. The need and justification of gas reserves as a part of legitimate investment has long been accepted as an axiom by all natural gas executives, but it would now seem that they must, with much effort and expense, present volumes of evidence to prove that a natural gas company, particularly a public utility, without gas reserves, is an absurdity. Where, unless from the P.W.A. or some other government agency, can any natural gas utility secure funds to invest or extend their service if their probable gas supply is limited to four or five years? It has, without question, been almost the universal experience that a natural gas property serving the public and entailing heavy expenditures for distribution, transmission and production systems, which have relatively small salvage value, must have a probable life of 15 years or more in order to attract capital at any reasonable rate of interest.

A company with reserves of short probable life must, in order to meet amortization and retirement charges besides operation and interest, establish such rates that competition with other fuels could not be met even though regulatory bodies might grant those rates. Under such circumstances, profitable rates which must be exhorbitant, could have only one advantage—those rates would, by the destruction of the volume of business, extend the life of the reserves an infinite term and neither manager nor investor could then urge the need of additional reserves.

### Trade Commission View

The Federal Trade Commission in its report on the Columbia Gas & Electric Corp. admits that a natural gas company in the utility field should be allowed to carry reasonable gas reserves. I desire to quote the following from the report: "Natural gas production results in progressive exhaustion of operated acreage. Construction of transmission and public utility distribution systems, on the other hand, involve large investments in facilities of relatively long life as compared with the productive life of any given group of producing wells. Consequently, the question of future gas supply as a protection of investments and a basis for assumption of public utility responsibility to serve in the future is a matter of first importance. Columbia Gas & Electric Corp. has adopted a policy of obtaining control of large acreages both proven and unproven gas land. Such a policy, it is claimed, is necessary to protect its large investments in transmission and distribution systems, and to prevent overexploitation and rapid exhaustion and waste of a limited natural resource in ways that do not best serve the interest of the vast majority of consumers in continued service at moderate rates."

From my own point of view, I cannot conceive of any natural gas utility as a going concern without probable gas reserves that will give it a life of at least 20 years. If reserves have a life of only 5 to 10 years, and prevailing gas rates are maintained, few if any properties can be profitably operated unless that life can later be extended either by purchases or new contracts. Under such urgent conditions as will exist when new reserves must be obtained, any chance of making reasonable production purchases or profitable gas purchase contracts is unthinkable. The available reserves adjacent to fixed investment will, by that time, be closely held and cost all the traffic can bear; quite likely more.

It is possible that some members of this association may be able to present another side to this question of reserves, but my experience in the operation of natural gas properties only emphasizes that the need and justification of adequate gas reserves is a most evident necessity heretofore universally admitted.

### Conservation of Natural Gas Reserves

Conservation, which is an old and familiar word to all natural gas producers, has been almost continuously discussed by our fraternity, and urged upon the management and employes of all natural gas producing and distributing companies for many years. In the early history of natural gas, markets were limited and the supply was considered practically inexhaustible, consequently little attention was given to waste or conservation. Markets expanded, waste continued, and conservation of reserves was little agitated until it became evident that many producers supplying large markets would soon be without an available supply of gas for their customers. It was then recognized that in most cases where discontinuance of service and premature salvaging of investments became necessary, had any ordinary degree of conservation and stoppage of waste been practiced, the service could have been extended many years and complete amortization of investments assured.

Throughout the eastern gas fields many producing and distributing companies were ruined and forced out of business with great loss to themselves and inconvenience to the public, simply because they did not follow the most ordinary rules of conservation. This hectic period in the development of the eastern natural gas industry has by its disastrous results strongly impressed upon managements the real and absolute necessity of conservation.

### Leakage Losses

So much has already been written on pipe line leakage, methods of locating, measuring, stopping and preventing present and future losses, that I do not here have the time to review the hundreds of methods now in common use to conserve gas, but will make a few remarks on present eastern field conditions and some detail methods we are now using.

It might here be noted that the use of welding and the improvement in quality of rubber used in couplings has reduced to very small volume the leakage losses in new pipe line, so that where soil conditions are at all favorable little trouble is to be expected in lines of recent construction. Old lines, however, are subject to as many ailments as there are kinds and qualities of material in their make-up, and require the application of more than all the remedies developed by the innumerable articles that have been written on conservation.

We have developed and are using hundreds of light, inexpensive lead-gasket saddles of our own construction, known to us as syphon saddles. On account of its simplicity and easy application to lines while under high pressure, this saddle is of immeasurable assistance in keeping lines free of fluid without appreciable waste of gas, and at the same time curtails the use of many costly line drips.

All of the eastern producing states now have reasonably sound well-abandonment and plugging laws, which protect or can be made to protect the gas fields from underground wastage or serious flooding. Red mud, clay, or other nonporous material that will not interfere with pulling casing, tubing or packer is much used around tubing and casing to prevent underground waste by seepage of water along casing, shoe or packer. Its general use is recommended at the time casing and tubing are run, rather than waiting until leakage of water has been detected and large losses suffered. Any leakage of the inside casing string places a heavy column of water on the tubing packer which may either destroy the packer, cut a channel around it, or be forced through the sand itself. Twenty feet of red mud or clay run on top of the packer at the time it is set will, in most cases, effectively stop this action and save the running of an additional string of casing.

It may also be of interest to note that leakage in casing and tubing may often be stopped by using a "water bottle" at the top of the well to turn into the tubing or casing a quantity of white lead and oil which will run down the inside of the string and as it reaches leaky joints be forced into the recesses and shut off those leaks.

### Losses Reduced

Losses of gas from oil wells have been reduced to a minimum by casinghead gasoline plants and low pressure field lines leading to low stage compressor stations. Employes have been very generally trained to open wells or drips to remove fluid, not gas; also that line freezes can usually be prevented by proper location and operation of efficient drips or syphons and in any event most effectively cured by thawing rather than blowing.

Wet wells with oil or water in the gas sand, of which there are very many in our old fields that must be pumped, bailed or swabbed to maintain gas flow, can, in my opinion be most economically treated by the pumping method. First cost of installation of pumping outfits causes many operators to hesitate to use this method, although it can, in most cases, be proven that the large saving of gas resulting from its use will offset the heavy first cost of equipment. In anticipation of the final necessity for such treatment of old wells, it has long been our practice to drill a pocket 50 to 60 feet below the gas pay when wells are completed, thus giving storage for seepage and reducing the time interval between required fluid removals.

Waste by field free gas customers has been greatly reduced by metering and allowing the use of only a reasonable amount of gas, a policy now supported by public service commissions. All new leases now assign definite limits to the volume that may be used by these unprofitable customers.

In the West and Southwest it is my understanding that conservation as applied to transmission and distribution is well in line with eastern efforts and practice, but in the production division, on account of present lack of market for large volumes of gas that are often obtained in connection with oil production, they still have a serious and difficult problem to solve.

*Before Natural Gas Department, American Gas Association, Memphis, Tenn.

### POTTERY TO DRILL FOR GAS

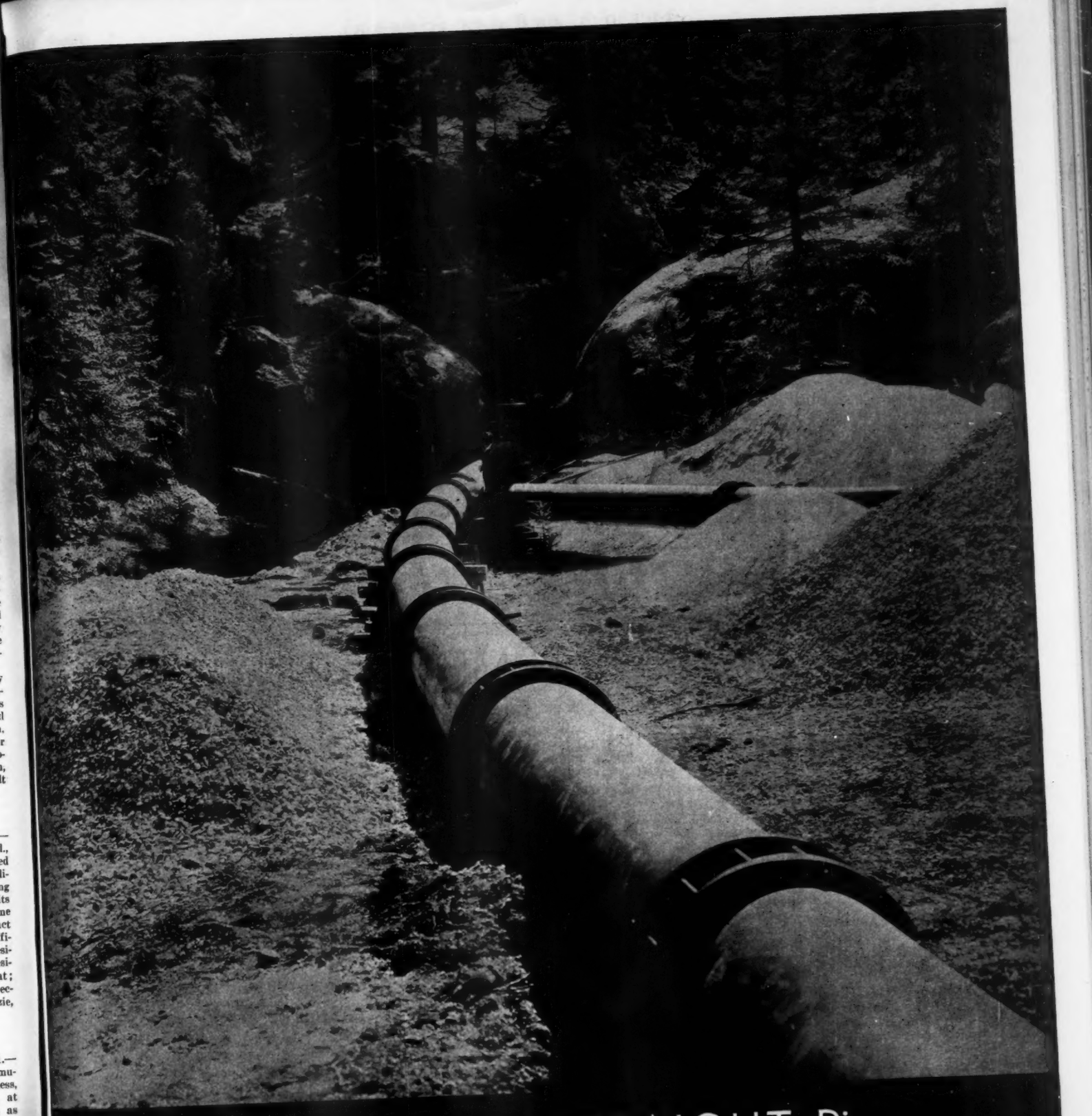
MEDICINE HAT, Alberta, June 1.—Shareholders of Medalta Potteries, Ltd., meeting at Calgary recently authorized the directors to drill for gas in the Medicine Hat Field. The company, operating a plant at Medicine Hat, has secured its natural gas supply from the Medicine Hat municipal system under a contract which expires in February, 1936. Officers of the Medalta company are: President, E. J. Gregory, Calgary; vice president, R. B. Davidson, Medicine Hat; secretary, R. G. Smith, Calgary; directors, A. D. Cummings, C. S. McKenzie, R. C. Carlile and O. C. Arnott.

### CHINESE GAS PROBLEM

MEDICINE HAT, Alberta, June 1.—A recent letter to the Medicine Hat municipal gas system from A. Bookless, auditor in the ministry of finance, at Chungking, China, seeks information as to the local method of handling the product. In the province of Szechuan, West China, are several gas wells from which gas is used in the boiling of salt brine. The method used from ancient times was simply to lead the gas from the wells in bamboo pipes. There is no system of storage, and gas is allowed to escape, which eventually reduces the pressure. The ministry of finance is seeking methods to conserve the gas and improve the pressure at all the boiling plants.

### WAINWRIGHT GAS FRANCHISE

WAINWRIGHT, Alberta, June 1.—The Wainwright town council has approved renewal of the franchise of the Wainwright Gas Co. to December 31, 1936. The company secures its natural gas supply from the Maple Leaf Oil & Gas Co. with wells in the Wainwright Field.



# CURVES . . . with STRAIGHT Pipe

The above curve is made with straight sections of plain-end pipe and standard Dresser Couplings, and illustrates an important advantage of the Dresser joint—its *flexibility*. • Each pipe section entering a Dresser joint can be deflected laterally or vertically for curves, grades, trench irregularities, etc., without injury to the coupling or without affecting its permanent tightness in any way. • This feature of flexibility is but one of *five* major advantages offered by Dresser Couplings. Use this modern method of connecting pipe on your next job. It has the approval of three generations of pipe line builders.

**S. R. DRESSER MANUFACTURING COMPANY, BRADFORD, PA.**

*In Canada*—DRESSER MANUFACTURING CO., LIMITED, 32 Front Street, West, Toronto, Ontario

# PERSONAL PARAGRAPHS

C. A. MOON, fields manager for the Trinidad Petroleum Development Company, Ltd., is in London, England, on vacation.

• • •

HAROLD MOORE, M.Sc., of Moore & George, Ltd., petroleum engineers, has returned to London, England, after visiting his Constantza office and Rumanian refineries.

• • •

HENRY BASKERVILLE, of the Western Fuel & Oil Company, of Minneapolis, Minn., was in Thermopolis, Wyo., as the guest of BRUCE SULLIVAN, of the Fern Oil Company.

• • •

TIP DEARMAN and H. J. DEARMAN have joined with JAMES L. ANDERSON in forming Anderson-Kerr & Dearman, Inc., drilling contractors and will operate from Houston, Tex.

• • •

NEILS MATHIESON, fields manager in Venezuela for British Controlled Oilfields, Ltd., has returned to London, England, on vacation. He is returning to Venezuela by the end of July.

• • •

W. C. MITCHELL, general manager of National Oil Refineries, Ltd., has gone to Iran, where he will act as deputy general manager of production during the absence on leave of MR. BAYLIS.

• • •

RALPH PRYOR, of Pryor & Lockhart, Inc., is planning an extended vacation on the Pacific Coast.

• • •

C. W. ANDERSON has been appointed business manager of Oklahoma Petroleum Marketing Association.

• • •

W. H. PATTERSON, of the Bishop Oil Company, has moved his headquarters from Tulsa to Wichita, Kans.

• • •

LEE CORNELL, president of the Kansas Oil Scouts Association, has been in the hospital at Wichita, suffering from an infected tooth.

• • •

ROY S. McKEOWN, secretary of the Ada Chapter of the American Petroleum Institute, is home from a vacation spent near Nashville, Tenn.

• • •

L. C. DECUIS, geologist, Associated Oil Company, Los Angeles, Calif., has been in Houston, Tex., for several days and has now returned to California.

• • •

I. E. DUGAN, deputy conservation officer for the Ada, Oklahoma, district, has returned from a vacation spent in Southwest Texas and northern Mexico.

• • •

NEIL BUCKLEY, in charge of the Tulsa office of the Cities Service Export Oil Company, visited the New York offices of the company last week.

• • •

J. A. LA FORTUNE, vice president of the Warren Petroleum Company, and MRS. LA FORTUNE, are now on a trip to New York City and other eastern points.

• • •

STUART H. O'BRIEN, of the International Petroleum Company, Ltd., Toronto, Canada, left New York City last week for Callao, Peru, on the Grace liner, Santa Inez.

• • •

JOHN KLEP, sales engineer, Reed Roller Bit Company, Houston, Tex., has recently returned from several months spent in investigating drilling problems in California fields.

H. T. KEMP, of Concession Branch head office, has been appointed secretary of the Anglo-Persian Oil Company, in succession to the late J. W. REOCH.

• • •

C. N. KIRKPATRICK, secretary and sales manager, together with MR. FUNK, Landis Machine Company, spent some time in Tulsa and the Mid-Continent area.

• • •

A. F. LESLEY was recently elected president of the Osage Oil and Gas Producers Association. Mr. Lesley is manager of the Egaso Operating Company at Osage, Wyo.

• • •

JOHN D. ROCKEFELLER, JR., and MRS. ROCKEFELLER, JR., returned last week to the United States from a 10-week trip abroad. They spent most of the time in Sicily.

• • •

C. M. LOEB, JR., of the Climax Molybdenum Company, New York City, leaves this month on a trip around the world for his company. He will return to the United States in October.

• • •

JOHN McFADYEN, vice president and general manager of the western division of the Ohio Oil Company, with headquarters in Casper, Wyo., attended a directors' meeting in Findlay, Ohio.

CHARLES I. WARREN, head of the Kansas land department of Shell Petroleum Corporation, is now located at Los Angeles, Calif. He had been in Wichita for 10 years, becoming head of the office two years ago. FRED M. OGLESBY succeeds him.

• • •

H. M. BLACK, of Los Angeles, Calif., assistant manager in charge of production for the Standard Oil Company of California, was a recent visitor at Laramie, Wyo., to inspect the new oil well on the Medicine Bow structure brought in by the California Company and the Ohio Oil Company.

• • •

L. S. (SPIDER) ALLEN, for many years district manager for the Naylor Pipe Company, Chicago, Ill., has accepted a position as district tubular manager for the Mid-Continent Supply Company, with headquarters at Tulsa. J. A. DAUGHERTY, vice president, Mid-Continent Supply Company, Houston, Tex., is being transferred to Tulsa.

• • •

NORTHRUP CLARY, head of the public relations department of the Standard Oil Company (New Jersey), was awarded a prize for one of the best editorial contributions to the 1935 Bawl Street Journal, burlesque publication, issued once a year by the Bond Club of New York City. Mr. Clary's contribution was a Washington letter.

• • •

A. R. McELREATH, of McElreath & Suggett, Inc., of Fort Worth, Tex., spent last week in Tulsa.

• • •

LOU WILKIE, of the marketing department of Phillips Petroleum Company, has been transferred to Denver, Colo.

• • •

CHARLES D. WELLS, scout for the Carter Oil Company at Wichita, Kans., visited at general headquarters, Tulsa, last week.

• • •

GLENVER McCONNELL, chief mechanical engineer of the Shell Petroleum Corporation, is spending his vacation at Marietta, Ohio.

• • •

H. F. WILCOX, president of the H. F. Wilcox Oil & Gas Company, Tulsa, has returned from a business trip to Washington, D. C., and New York City.

• • •

DR. ROBIN WILLIS has returned to Calgary, Alberta, from Los Angeles, Calif., where he attended the annual meeting of the Nordon Corporation.

• • •

J. C. BALLAGH, Patterson-Ballagh Corporation, Los Angeles, Calif., stopped off in Tulsa en route to the Gulf Coast after having visited the oil fields of Wyoming.

• • •

P. D. McLAREN, president and managing director of the Murietta California Oils, Ltd., of Vancouver, British Columbia, recently visited Lethbridge and other southern Alberta points.

• • •

W. B. McCLINTOCK, petroleum engineer and geologist for the Sloan Zook Oil Company, has resigned from that company to engage in private consultation work with offices in Oil City and Titusville, Pa.

• • •

RALPH T. ZOOK, president of Sloan Zook Oil Company, is flying from Pittsburgh, Pa., to Los Angeles, Calif., on the first leg of an extensive vacation tour of California and the Rocky Mountain states.

## DO YOU REMEMBER?

From The Oil and Gas Journal Files

### 25 Years Ago

June 6, 1910

Mrs. W. H. Milliken, wife of a widely known oil producer, died recently in Bowling Green, Ky.

A Holland syndicate will take over the shallow sand oil holdings of Gunsburg & Forman, David Gunsburg, Gunsburg, Forman & Lovell and Marietta Oil Co. Ralph Hochstetter is also interested in some of the property to be sold to the syndicate. The purchase price is said to be about $1,500,000. The leases lie between Chelsea and Delaware, Okla.

All of the wells completed in Kansas in May were in Allen, Neosho, Wilson, Chautauqua, Montgomery and Elk Counties. Outside of those counties one solitary well is drilling. The report from that State says, "All the producing area in Kansas seems to have been practically defined, although a small pocket may be found here and there within the old lines." The State is producing 3,000 bbls. per day.

### 20 Years Ago

June 6, 1915

Maj. Adam Miller, pioneer producer in Venango County, Pennsylvania, died at Foxburg, Pa. William Chambers, also a Venango pioneer, dies in San Diego, Calif. Louis Heilperin, one of the early day producers in North Louisiana, dies in Shreveport.

Tulsa is to have another tall office building. S. Gallais, successful oil producer, will build it at the northeast corner of Fourth Street and Boston Avenue, to a height of eight stories.

The present production of the Cushing Field is variously estimated at from 280,000 to 300,000 bbls. The deep pay is very rich in oil, but water breaks in and the flush is short lived in some of the wells.

Thirty-five million barrels of oil is stored in steel tanks in the Cushing Field.

### 10 Years Ago

June 4, 1925

The average recovery of gasoline from crude oil in the first three months of this year in the United States was 34.7 per cent. Rocky Mountain refiners led with a percentage of 58.3. California was the lowest with a percentage of 22.9.

Four old-time oil men died within the week: J. S. Barlow, of Bradford, Pa., age 75, who pioneered in the Osage and Bartlesville fields in Oklahoma; Rolland A. Hughes, of Cygnet, Ohio, age 72, who operated in Pennsylvania, Ohio, Indiana, Illinois and Oklahoma; Charles S. Clarke, of New Castle, Pa., age 81, who was one of the organizers of the Oil City and Bradford oil exchanges, and Dallas P. Sisk, of Oil Springs, Ontario, age 79, a pioneer in the oil fields of the province of Ontario.

There are 122 oil refineries in Texas, 72 of which are operating.

It requires 50,000 bbls. of oil per day to maintain the United States fleet operating under war conditions.

J. EDGAR PEW, vice president, Sun Oil Company, Philadelphia, Pa., spent about a week in Dallas, Tex., recently.

• • •

HOUSTON SMITH, assistant purchasing agent, Sun Oil Company, Dallas, Tex., with his family, made a holiday trip to Galveston, Tex., over the week-end.

• • •

WILLIAM RUBUSH, of Dallas, Tex., has been made supervisor of oil company and supply company exhibits for the Texas Centennial Central Committee.

• • •

IRVING PERRINE, geologist and engineer, is to resign as special consultant of the Securities and Exchange Commission, and return to the practice of geology in Oklahoma.

• • •

DR. BLAINE B. WESCOTT, chief metallurgist of the Gulf Companies, Pittsburgh, Pa., is spending a week in Texas on company business, visiting the West Texas properties of the company while there.

• • •

DR. E. R. REDGROVE, joint managing director of Snowdon, Sons & Company, London, England, has been visiting the United States, inspecting the latest developments in American lubricating oil manufacture.

• • •

LEE HAUGEN, superintendent of the Empire Oil & Refining Company's plant at Ponca City, Okla., and MRS. HAUGEN, will leave in the middle of June for a pleasure trip through England, France, Germany and Switzerland.

• • •

J. M. CRAWFORD, chairman of the board of directors, Parkersburg Rig & Reel Company, Parkersburg, W. V., accompanied by MRS. CRAWFORD, sailed for New York City, May 29, and will land June 4, completing a world tour.

• • •

WALTER H. MEIER, engineer, Atlantic Oil Producing Company, Dallas, Tex., is in Fresno, Calif., at the golden wedding anniversary celebration of his parents, DR. and MRS. HENRY MEIER, formerly of Centre College, Danville, Ky.

• • •

A. L. ELLSWORTH, president of the British-American Oil Company of Toronto, Ontario, visited Calgary, Alberta, recently in the course of an inspection tour covering the company's refining and distributing activities in western Canada.

• • •

HENRY COOLIDGE has resigned as superintendent of operations for the Atlantic & Pacific Petroleum Company's properties in Wyoming, and has moved to Oilmont, Mont., where he is associated with his uncle, E. B. (HARDROCK) COOLIDGE, in contract drilling and management of oil and gas properties.

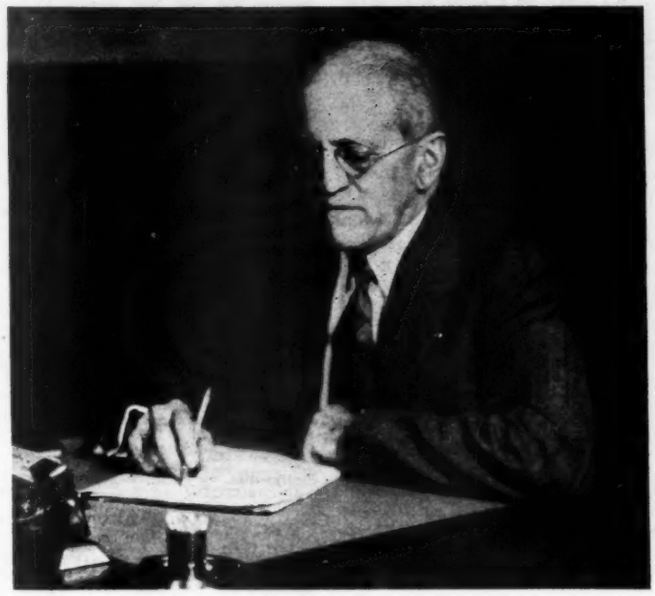
• • •

J. K. KERR, senior vice president, and a director of the Ohio Oil Company, has retired. Mr. Kerr has spent more than 40 years in the service of the company, and was general superintendent of the Illinois, Arkansas and Louisiana operations of the Ohio Oil Company, and in East Texas for the Marathon Oil Company.

• • •

G. H. van SENDEN, vice president of the Shell-Union Oil Corporation, New York, has gone to the San Francisco offices of the Shell Oil Company of California, where he will be located indefinitely. Mr. van Senden formerly was vice president of the California Shell in charge of refinery operations. He was transferred to the New York offices of the Shell-Union company in the fall of 1933, where he had general supervision of all Shell refinery operations in the United States.

## Keen Student of Refinery Methods



### L. D. FULTON

L. D. Fulton, general superintendent of refineries for the Pennzoil Company, who built a broad foundation for his work in the oil industry, is a keen student of refining methods and has been among the leaders in developing new or improved processes.

Mr. Fulton was born in Titusville, Pa., in 1869, and attended the public schools of that city, afterward graduating from Clark's Commercial College and then joining his father in the oil producing and contracting business under the name of David Fulton & Son.

When the Oil Creek branch of the Manhattan Oil Company was organized in Titusville, he entered its service as engineer. Later he was engaged as traveling engineer for the Carbondale Machine Company. In this capacity he manufactured the first artificial ice on the Isthmus of Panama. His work took him over all the United States, Canada and South America, and he gained extensive knowledge of refining methods. He developed the first mechanical chilling machine for chilling wax distillate.

In 1901 Mr. Fulton joined the Germania Refining Company, of Oil City, Pa., which later became the Pan-American Refining Company and is now the Pennzoil Company. For the last 20 years he has served as general superintendent of refineries.

Mr. Fulton has taken out several patents on improved methods and appliances which are in use by the Pennzoil and other companies. During the World War he was a member of the Fuel Conservation Board. He was associated with Dr. W. F. Rittman, Dr. Gustav Egloff and others in the development of cracking fuel oil, and he designed, built and operated the first vapor phase cracking plant which was a modification of the Rittman process.

J. HEERTJES, an area manager of the Asiatic Petroleum Company, Ltd., has been appointed a member of the executive committee formed to administer the Netherlands and Netherlands Indies Information Bureau just established in London, England, under the auspices of the Netherlands government.

• • •

J. E. MOORHEAD, executive secretary of the Pennsylvania Grade Crude Oil Association; H. W. SMITH, assistant secretary, and G. H. SHELDON, of Hommann, Tarcher & Sheldon, Inc., have returned to their offices in Oil City, Pa., and New York City, after completing a comprehensive business survey extending from Massachusetts to the Rocky Mountain states.

• • •

P. A. WIGGINS, JR., independent producer, Dallas, Tex., occupied the head chair at the "story tellers'" table in the Petroleum Club at Dallas, with FRANK I. BRINEGAR, Continental Supply Company, at his right as runner-up. CARL A. YOUNG, A.P.I., was at the foot of the class but is still hopeful. The head chair at this table is awarded to the man telling the best story at the luncheons each week.

GEORGE PUTNAM is now acting division geologist at Oklahoma City, Okla., for the Lario Oil & Gas Company. He was formerly stationed at Wichita, Kans.

• • •

J. S. BLACKMAN, deputy conservation officer for the Tulsa district, with MRS. BLACKMAN, has started for Washington, D. C., and New York on a vacation trip.

• • •

DAVID J. SNAKARD, who has been scout for years in Kansas for the Texas Company, has retired from active service and will be succeeded by PAUL M. YOUNGMEYER.

• • •

LeROY H. HINES, assistant legal adviser in the United States Department of the Interior, Washington, D. C., has resigned to accept a position with the Standard Oil Company of California, at San Francisco, Calif., effective June 15.

• • •

BILL BROOKOVER, formerly superintendent for the Gulf Production Company at Wichita Falls, Tex., and more recently with other independent firms in Texas, is now production superintendent of the Shasta Oil Company, Big Spring, Tex.

• • •

R. W. NICHOLS, engineer for Black, Sivalls & Bryson, Inc., has been transferred from Oklahoma City, Okla., to Fort Worth, Tex. A. A. ARRAS, former representative for the company at Fort Worth, is moving to Houston, Tex., July 1 to represent the Wall Rope Company.

• • •

GORDON GRIFFIN, chief petroleum engineer of the oil and gas division of the Texas Railroad Commission, has been advanced to the head of the division of production of the commission, and V. E. COTTINGHAM has been promoted from deputy supervisor at San Angelo to fill the vacancy caused by Mr. Griffin's promotion.

• • •

P. E. FLUOR, vice president and general manager of the Fluor Corporation disembarked at Los Angeles Harbor, Saturday, June 1, from the Panama Pacific liner, S.S. Pennsylvania, after a trip from New York via the Panama Canal. He has been away from his headquarters on a business trip which covered a period of five weeks and included stops at Houston, Tulsa, St. Louis, Chicago, Philadelphia and New York. He was accompanied by MRS. FLUOR.

• • •

R. H. ALAGOOD, of Norman, Okla., has become a member of the West Texas district geological staff for Amerada Petroleum Corporation. W. D. ANDERSON is district geologist, with JOHN M. HILLS, S. R. SELF, J. R. DAY and Mr. Alagood as aids.

• • •

V. R. GARFIAS, manager of the foreign oil department of Henry L. Doherty & Company, New York, has been elected president of the Mexican Chamber of Commerce in the United States. Mr. Garfias is a native Mexican, educated at Stanford University.

• • •

DRS. K. WASHINGTON GRAY and GEORGE LEES, geologists of the Anglo-Persian Oil Company, will assist the Commonwealth of Australia committee appointed to investigate the possibilities of discovering domestic petroleum supplies, particular attention being paid to New Guinea. Doctor Lees will examine the data already prepared and advise as to the most likely areas for detailed examination. He is expected back in London by the end of June, leaving Doctor Gray to supervise the program. This step is one of the actions promised by SIR JOHN CADMAN during his recent visit to Australia.

## Canadian Fields

(Continued from Page 71)

Prairie Siding bridge, is some distance east of production, and will test a possible easterly extension.

In Essex County, Bon Jasperson's No. 2 in Gosfield South Township, east of Kingsville, finished around 950 feet with about 25,000 feet a day.

On Pelee Island, Essex County, a Detroit syndicate is below 705 feet on a test for oil. Production is looked for around 760 feet.

## Michigan Fields

(Continued from Page 73)

2,710 feet after topping the Dundee at 2,534 feet. It made 95 bbls. a day.

Roy F. Ide, Trustee's No. 1 Wilcox, NW NW NW Section 28, same township, was completed for 50 bbls. a day at 2,707 feet after topping the Dundee at 2,530 feet.

Muskegon Oil Corp.'s No. 1 Arthur Fisk, NE NE NE Section 29, same township, was good for about 45 bbls. a day in the Dundee.

J. W. Leonard and others' No. 1 Heintz, SW NE NE Section 24-22n-1e, Ogemaw Township, made about 40 bbls. a day after topping the Dundee at 2,626 feet and drilling to 2,791 feet, total depth.

These wells showed a decline of from 15 to 50 bbls. shortly after acid treatment and first day's production.

### Wildcats

Sun Oil Co. is expected to make its final decision with regard to the No. 1 Mary A. Hines, C NW NE Section 31-17n-1w, Tobacco Township, Gladwin County, from which 1 to 2 bbls. of oil was being pumped daily after near failure in the Dundee in the Beaverton section. It may be plugged and abandoned.

Strange & Fortney, Mount Pleasant operators, struck a show of oil in the Dundee at about 3,200 feet in the formerly abandoned No. 1 Patterson & Day, SW NE SW Section 19-18n-12w, Cherry Valley Township, Lake County, north of Newaygo County and in western Michigan. The old well has been deepened from 2,970 feet, where it was shut down for about five years.

The Muskegon Development Co. started erecting a rig last week and will start drilling this week on a block of leases obtained by the West Ashland Development Co. in Section 8, Ashland Township, near two wildcats drilled several years ago in Ashland and Garfield Townships, both of which had shows in the upper Traverse at about 2,100 to 2,200 feet.

Charles W. Teater, who opened the big Porter Pool, also will drill in Section 5, Brooks Township, Newaygo County.

### Drilling Permits

Eight drilling permits, all of them for tests in proved fields, were issued by the state conservation department during the week of May 22 to 28.

Only two were for the Crystal area, as follows: Wing Brothers' No. 1 Crystal Schoolhouse, near the Taggart-Smith, SW SW SW Section 1-10n-5w, Crystal Township, Montcalm County, and the same operators' No. 1 Currence, NW NW SE Section 15, Crystal Township.

Three Isabella County locations included the Wittmer Co.'s No. 1 Hudak, SE NE Section 11-15n-4w, Isabella Township and County; the Chartiers Oil Co.'s No. 1 Asa Prout, SW SE Section 12, same township, and the same company's No. 2 Edgar Graham, SW SE SW Section 28-15n-3w, Denver Township.

The Pure Oil Co. took out two permits for locations in Midland County, one the No. 4 Arthur N. Ward, NE SW SE Section 7-14n-2w, Greendale Township, and the other the No. 2 J. M. Hicks, SW NW SW Section 14-13n-1w, Porter Township.

Strange & Fortney's No. 1-A State of Michigan, NE NW SW Section 6-21n-3e, Mills Township, Ogemaw County, completes the permit list.

St. Louis Pipe & Supply Co. also started to build rig on the No. 1 Davenport, Section 34, Crystal Township, about 2½ miles south of the Durbin well.

Jones and Durham also are building a rig for the Muskegon Development Co.'s No. 1 Mary E. Eggleston, NW SW Section 9-21n-2w, Nester Township, Roscommon County, on a single lease covering a block of 14,000 acres. The new test is 12 to 15 miles north of the Black Diamond test in Lyons Township, same county, which had a show of free oil recently in the Dundee at 3,409 feet.

## Oklahoma Fields

(Continued from Page 79)

11,414,000 feet of gas. It was shut down for potential.

### Kay County

Wentz Oil Corp.'s No. 3 Harman Herman, NE SW NW Section 8-28-1e, Blackwell area in Kay County, deepened from 3,335 feet, got sand at 3,341 feet and drilled to 3,368 feet. It swabbed 19 bbls. of oil from pay at 3,347-52 feet, but it was drilled too deep and water had broken in. The hole was plugged back but the well is not a completion.

Argo Oil & Gas Co.'s No. 1-A Sutton, C NE SE Section 30-25-1w, in the Tonkawa area, was awaiting pumping equipment to test Chat production. Chat was topped at 4,226 feet and was shot with 40 quarts at 4,285-95 feet, Chat bottomed at 4,300 feet. It swabbed 30 bbls. naturally and the shot did not improve it. It was bottomed in Mississippi lime at 4,324 feet.

### Southern Completions

R. E. Johnson and others completed No. 1-A Schick, SW cor. NW NE Section 27-1s-8w, Duncan district, Stephens County, a 6-bbl. well from sand at 1,970-75 feet, total depth.

Mudge Oil Co.'s No. 41 Woods, NE cor. SE NE NW Section 26-1s-5w, Stephens County, is a 12-bbl. pumper, completed in sands at 665-94 feet and 703-15 feet, total depth. The oil is 27 gravity.

W. J. McAllister and others' No. 1 Leach, SE cor. SE NW Section 11-2s-8w, Duncan district, Stephens County, was dry and abandoned at 2,155 feet. It missed all sands.

Keaton and others abandoned No. 1 Roland, a wildcat in NW NE NE Section 18-3s-10e, in Atoka County. It had been drilled to 3,844 feet where it had a hole full of water. It was plugged back to 757 feet and acidized with no results.

Amerada Petroleum Corp. and Stanolind Oil & Gas Co.'s wildcat in Love County, No. 1 Westheimer, NW SE SE Section 27-6s-2e, which was to have been a 3,000-foot test, was abandoned at 1,873 feet. A crooked hole developed.

J. V. Scrivener and others' No. 1 Central Life Association, NE SW SW Section 34-6s-21e, McCurtain County, was abandoned at 970 feet. It had no showings.

Gypsy Oil Co.'s No. 2 Kelly, SW NE NE Section 10-1n-20w, in the Altus Pool in Jackson County, was completed. It flowed 87 bbls. the first 24 hours from Granite Wash at 1,458-74 feet.

First reports of new work in the southern fields include Louis Sikes' No. 4 Dolan, 475 feet south and 1,050 feet east of NW cor. Section 15-1s-8w, Stephens County, rig up; Mudge Oil Co.'s No. 42 Woods, SE cor. NE NE NW Section 26-1s-5w, drilling at 260 feet; Evans & Groves' No. 4 Ratliff, 1,080 feet north and 510 feet east of SW cor. Section 28-1s-2w, Carter County, drilling at 250 feet; Camedan Oil Co.'s No. 6 Trahern, 660 feet north and 180 feet west of C Section 31-1s-2w, location; Amos Drilling Co.'s No. 1-A Ponder, NE SE NW Section 6-3s-2w, spudded; Bland and others' No. 2-A Godwin, 440 feet north and 160 feet west of NE cor. Section 10-6s-6e, Marshall County, drilling at 100 feet; Levelle Coal Co.'s No. 1 Walkup, SE NE NE SW Section 1-8s-5e, Marshall County, drilling at 260 feet; Hornsby & Jones' No. 1 Sadler, NE NE NW Section 20-1n-2e, Murray County, location; R. H. Pierce and others' No. 1 Aetna Life Insurance Co., NW SW NE Section 10-1n-13, Atoka County, rig; Golden & Cochran's No. 1-A Gam, 870 feet north and 570 feet west of C Section 31-2n-4w, Stephens County, drilling 310 feet.

Manson Oil Co. and others' No. 1 Minor, NW NE NE Section 15-1n-20w, in the Altus Pool, Jackson County, is good for 30 bbls. from Granite Wash at 1,414-54 feet, total depth 1,456 feet. The well made a flow while the big pipe was being pulled.

Louis Sikes' No. 3 Dolan, 990 feet south and 1,050 feet east of NW cor. Section 15-1s-8w, in the Duncan Field, Stephens County, had oil sand at 2,119-21 feet, total depth. It swabbed 150 bbls. of oil and a little water in 24 hours.

## Kansas Wildcats

(Continued from Page 74)

**Shell Pet. Corp.'s No. 1 Wenger, NE cor. Sec. 2-20-1w.**
**Viola 3,356-64 ft., T.D.; swbd. 255 bbls. in 10 hrs.; 50% wtr.; acidized; potential production 100 bbls. oil, 620 bbls. of wtr.; P.B. to 3,359 ft.; pumped 80 bbl. of oil and 210 bbls. of wtr. in 7 hrs.; S.D. for pipe line.**

J. M. Washabaugh et al's, No. 1-A Berg, SW SW NE Sec. 15-20-3w.
Moving in material.

**NESS COUNTY**

**Philips Pet. Co.'s No. 1 Young, C NW SW Sec. 13-18-21w.**
C.O. at 4,008 ft.; T.D.

**OSAGE COUNTY**

**Jim Edwards' No. 1 Detrick, C NW SE Sec. 21-14-15.**
**Show oil and gas 783-800 ft.; T.D. 800 ft.**

**RENO COUNTY**

**Bradley's No. 1 Olmsted, SW SW SW Sec. 32-22-7w.**
**Moving in material.**

**Foraker et al's No. 1 Hiett, SE SW NE Sec. 34-24-4w.**
**T.D. 1,285 ft.; S.D.**

**Gypsy Oil Co.'s No. 1 Tonn, SW NW SE Sec. 16-25-4w.**
**T.D. 3,581 ft.; waiting for cmt.**

**Haynes Bros.' No. 1 Mueller, SE SE NW Sec. 30-24-4w.**
**T.D. 196 ft.; waiting for cmt.**

**L. A. Mylius et al's No. 1 Sprowl, NE NW NE Sec. 1-24-5w.**
**Ran 6-in. pipe 3,565 ft.**

**RICE COUNTY**

**Anderson & Kerr's No. 1 Wernet, NW NW NW Sec. 24-20-6w.**
**R.U. rotary.**

**Day et al's No. 1 Mason, NW NE NE Sec. 28-21-7w.**
**(Mystery well.)**

**Fred Rust et al's No. 1 Brown, NE cor. Sec. 16-21-6w.**
**Rigged up.**

**Vickers Pet. Co. et al's No. 1 Gouldner, SE NE NW Sec. 16-18-9w.**
**K.C. lime 2,879 ft.; 8,270,000 ft. at 2,995-99 ft.; S.D. 3,020 ft.**

**ROOKS COUNTY**

**Murfin et al's No. 1 Washusin, NE NE SE Sec. 19-9-16w.**
**Rig.**

**Smith & Ash's (Carman & Hershey) No. 1 Nelson, NW NW NE Sec. 27-10-16w.**
**S.D. 132 ft.**

**Trees Oil Co. and Findeiss' No. 1 Johnson, SW SW SE Sec. 26-10-19w.**
**S.D. 1,196 ft.**

**RUSH COUNTY**

**P. Boyle et al's No. 1 Yost, C SW SW Sec. 28-17-18w.**
**Drlg. 2,460 ft.**

**Eldorado Ref. Co.'s No. 1 Stang, SE NW Sec. 36-17-17w.**
**Drlg. 1,945 ft.**

**Lario O. & G. Co. et al's No. 1 Gillig, NE SE NW Sec. 24-17-17w.**
**Moving in material.**

**Lario O. & G. Co. and Phillips Pet. Co.'s No. 1 Benbow, NW NE NE Sec. 12-17-19w.**
**T.D. 3,790 ft.; fishing.**

**Twin Drlg. Co. et al's No. 1 Appl, SW SW NE Sec. 29-17-17w.**
**Moving in material.**

**RUSSELL COUNTY**

**J. Brouk and R. D. Bailey's No. 1 Kleusner, NW SE Sec. 34-15-12w.**
**S.D. 325 ft.**

**Buffalo Oil Co.'s No. 1 Kunz, NE NE SW Sec. 19-14-15w.**
**Cellar.**

**Hartman & Blair's No. 1 Claussen, SE NE SW Sec. 34-12-14w.**
**Moving in material.**

**Hartman & Blair's No. 1 Rexroat, NE NW NW Sec. 31-14-14w.**
**Spudded.**

**Murphin et al's No. 1 Funk, SW cor. Sec. 19-12-13w.**
**Drlg. at 3,040 ft.**

**Murfin et al's No. 1 Gorham estate, NE NE SE Sec. 29-14-15w.**
**Cellar.**

**Pryor and Lockhart's No. 1 Spicer, NE SE Sec. 21-11-15w.**
**Rigging up.**

**Reserve Pet. Co.'s No. 1 Moore, NW NW SW Sec. 15-13-12w.**
**Rigging up.**

**Ryan Pet. Co.'s No. 1 Newbold, NW SE NE Sec. 25-12-15w.**
**Drlg. 3,190 ft.; (correction).**

**Vernon & Murphin's No. 1 Becker, NE cor. Sec. 32-15-13w.**
**Drlg. 2,200 ft.**

**Wakefield & Armer's No. 1 Hall, NE SE SW Sec. 36-14-15w.**
**Fishing; T.D. 2,910 ft.**

**A. E. Seely et al's No. 1 Herman, SE NW Sec. 27-12-15w.**
**S.D. 450 ft.**

**Winkler & Koch's No. 1 Harman, SE SE NW Sec. 27-12-15w.**
**Drlg. 600 ft.**

**Wolf Creek Oil Co. et al's No. 1 Penn Mutual, SW cor. Sec. 22-15-15w.**
**U.R. 8-in. csg. to 2,880 ft.**

**SEDGWICK COUNTY**

**Allison & Fitzwilliams et al's No. 1 Struthers, NE SW Sec. 34-28-2w.**
**T.D. 3,295 ft.**

**Magnolia Pet. Co.'s No. 1 Bartholomew, SE SE SW Sec. 30-27-4w.**
**Chat 3,682 ft.; 9-in. 3,692 ft.; standardizing.**

**Western Kansas O. & R. Co.'s No. 1 Betzen, SE NE Sec. 17-26-3w.**
**Siliceous lime 4,250-70 ft.; T.D.; H.F.W.; abd.**

**SCOTT COUNTY**

**Atlantic Oil Prod. Co.'s No. 1 Mark "A," C SE SE Sec. 28-20-33w.**
**Good show of oil 4,744-56 ft.; testing.**

**STAFFORD COUNTY**

**C. B. Davis et al's No. 1 Riley, SE cor. Sec. 19-22-11w.**
**Drlg. 2,765 ft.**

**Empire O. & R. Co.'s No. 1 Grove, NE NE NW Sec. 5-22-11w.**
**Drlg. 1,395 ft.**

**Helmerich & Payne's No. 1 Geisler, NW NW SE Sec. 28-22-12w.**
**Drlg. 500 ft.**

**SUMNER COUNTY**

**Allison & Fitzwilliams et al's No. 1-B Hitchcock, SE NW Sec. 16-30-1w.**
**Drlg. 200 ft.**

**Wakefield et al's No. 1 Newton, SE cor. Sec. 21-30-2.**
**Location abd.**

**D. J. Wilson et al's No. 1 Clark, 1,320 ft. from W and 25 ft. from S line of NW Sec. 15-35-1w.**
**S.D. 1,000 ft.**

**TREGO COUNTY**

**Central Commercial's No. 1 Wagg, NW NW SE Sec. 17-13-21w.**
**T.D. 1,600 ft.; S.D.**

**Hansa & Lauck and Olson Drlg. Co.'s No. 1 Lang, SE SE NW Sec. 1-14-21w.**
**Rigged up.**

**Jenmar Oil Co.'s No. 1 Jones, SE cor. Sec. 20-12-23w.**
**Drlg. 4,150 ft.**

**WOODSON COUNTY**

**Foster and Schultz's No. 1 Ferguson, C S½ NE SW Sec. 12-26-13.**
**Dry and abd. 1,400 ft.**

## Gulf Coast Wildcats

(Continued from Page 67)

**deg. W from No. 9-B Belcher, H. N. Little Sur.**
**Drlg. shale and lime 4,071 ft.**

**Texas Co.'s No. 1 O. W. Halligan, center of Lot 27, H.T.&B. Sur. No. 23.**
**Location.**

**Texas Co.'s No. 1 O. W. Halligan, center of Lot 26, H.T.&B. Sur. No. 23.**
**Location.**

**Texas Co.'s No. 3 O. L. Rash, 920 ft. S, 41 deg. E and 330 ft. S, 42 deg. W from N cor. of Lot No. 22, T. Spraggin Sur.**
**T.D. 4,125 ft.; 7-in. csg. 4,075 ft.**

**Texas Co.'s No. 4 A.R.G.G.H., 442 ft. W and 247.5 ft. S of NE cor. Lot 36, H.T.&B.**
**T.D. 4,058 ft.; 7-in. csg. 4,050 ft.**

**Texas Co.'s No. 1 C. P. Dawson, 2,475 ft. S, 441.9 ft. W of NE cor. of Lot 59, H.T.&B. Sur. No. 23.**
**T.D. 5,646 ft.; 7-in. csg. 5,627 ft.; waiting on orders.**

**Texas Co.'s No. 17 Houston Oil Fields Assn., 244 ft. S, 244 ft. W from NE cor. of Lot 1, A.C.H.&B. Sur. No. 91.**
**10-in. csg. 1,134 ft.; drlg. shale and boulders 2,460 ft.**

**Texas Co.'s No. 16 Houston Oil Fields Assn., 247 ft. S, 440 ft. E from NW cor. of Lot 19, A.C.H.&B. Sur. No. 91.**
**Location.**

**Texas Co.'s No. 2 Dawson, 247 ft. S, 241 ft. W of NE cor. of Lot 58, H.T.&B. Sur. No. 23.**
**Location.**

**Trumba Oil Co.'s (J. M. Campbell) No. 1 H. McCauley, 150 ft. each way out of NE cor. of W 5 acres of Lot No. 2, A.C.H.&B. Sur. No. 91.**
**Location.**

**Turnbull & Irwin's No. 1 Hart, center of Lot 10, H.T.&B. Sur. No. 24.**
**T.D. 5,687 ft.; 7-in. csg. 5,654 ft.; drlg. plug.**

**Uscan Oil Co.'s No. 1 Metzer, center of Lot 19, H.&T.R. Sur. No. 23.**
**T.D. 3,996 ft.; reaming to set 7-in.**

**Whittle Oil Co.'s No. 1 Duke, 320 ft. W of E line, center N and S Lot 18, H.T.&B. Sur. No. 23.**
**Spudded and S.D.**

**OLD OCEAN—BRAZORIA COUNTY**

**Harrison & Abercrombie's No. 2 Bernard River, 1,000 ft. N, 54 deg. W, 400 ft. S, 36 deg. W of No. 1, Charles Breen Sur.**
**20-in. csg. 70 ft.; drlg. clay 560 ft.**

**PLEDGER—BRAZORIA COUNTY**

**Humble O. & R. Co.'s No. 1 T. L. Smith, 1,283 ft. NE from W cor. of 88.86-ac. lease, thence 887 ft. SE at R/A. D. McNeel Sur.**
**Top sand 5,691 ft.; 7-in. csg. 6,550 ft.; T.D. 6,670 ft.; I.P. 700,000 ft. of gas per day through ¼-in. choke.**

**PORT LAVACA—CALHOUN COUNTY**

**Adrian Moore et al's No. 1 O. F. McMaster, 330 ft. out of SE cor. of 80-ac. tract, M. Sanches Sur.**
**Drlg. shale 4,650 ft.**

**Halliburton Oil Prod. Co.'s No. 1 Bruton 660 ft. due E of Steinberger Pet. Co.'s No. 1 Ishofner, M. Sanches Sur.**
**T.D. 6,262 ft.; I.P. 80 bbls. per hr. through ¼-in. choke; tubing pressure 600 lbs.; csg. pressure 400 lbs.**

Texas Co.'s No. 1 Ada Foster, 1,250 ft. W along S line from SE cor. of lease and 466 ft. N at R/A, A. Esparza Sur.
Rig up.
Texas Co.'s No. 1 Geryk, 1,400 ft. W from E line, 470 ft. N from S line of lease, Lot 7, Ysidro Benavides Sur.
Drlg. sandy shale 6,252 ft.
Texas Co.'s No. 1 Kupatt, 466 ft. E from S line of lease, Lot 17, Ysidro Benavides Sur.
Drlg. shale and boulders 860 ft.
Texas Co.'s No. 1 Shofner, SE offset to Steinberger's No. 1 Shofner, M. Sanches Sur.
Drlg. shale 6,050 ft.
Texas Co.'s No. 1 I. Blardone, 1,650 ft. from E line and 1,350 ft. from N line of lease, Samuel Shupe Sur.
Abd. 7,402 ft.
Texas Co.'s No. 1 R. Duelberg, 1,565 ft. NE along S line from SW cor. of lease and 390 ft. N at R/A, M. Sanches Sur.
T.D. 6,246 ft.; running 7-in. csg.
Texas Co.'s No. 1 J. A. Marten, 1,700 ft. SW along N line from NE cor. and 1,400 ft. at R/A in SE direction, Florentina Garcia League Sur.
S.D. 7,078 ft.; repairing rig.
Tulane Gordon's No. 1 W. A. Shofner, 339.5 ft. from N line, 295 ft. from E line of block, D. Tilley Addn., M. Sanches Sur.
Location.

**ANAHUAC—CHAMBERS COUNTY**

Humble O. & R. Co.'s No. 2 Broussard, 2,332 ft. E of W line, 2,332 ft. N of S line of Sec. 63, H.&T.C. Sur.
Location.
Humble O. & R. Co.'s No. 3 Broussard, 1,399 ft. out of NW cor. of Sec. 63, H.&T. C. Sur.
Location.
Humble O. & R. Co.'s No. 2 Clark, 2,332 ft. W of E line, 2,332 ft. N of S line of Sec. 57, H.&T.C. Sur.
Derrick.
Humble O. & R. Co.'s No. 3 Middleton, 2,332 ft. N of S line, 2,333 ft. E of W line of Sec. 58, H.&T.C. Sur.
Drlg. shale 6,007 ft.
Humble O. & R. Co.'s No. 2 Middleton, 466 ft. out of NE cor. of H.&T.C. Sur., Sec. 64.
T.D. 7,126 ft.; 7-in. csg. 7,076 ft.

**BARBERS HILL—CHAMBERS COUNTY**

Mills Bennett Prod. Co.'s No. 2-C Barber, 93 ft. N of No. 1, 100 ft. E of W line.
Drlg. sand and shale 5,126 ft.
Sun Oil Co.'s No. 7 Higgins, 50 ft. S of N line, 50 ft. W of E line.
Drlg. shale 3,818 ft.
Sun Oil Co.'s No. 11 Chambers County, half way between and in line with Nos. 9 and 10.
Drlg. salt 3,000 ft.
Texas Gulf Prod. Co.'s No. 6 Wilburn, 50 ft. N of S line, 25 ft. E of W line, William Hodges Sur.
Top lime 3,039 ft.; T.D. 3,889 ft.
Texas Gulf Prod. Co.'s No. 3 Fitz, 450 ft. E of W line, 75 ft. N of S line.
T.D. 4,619 ft.; I.P. 500 bbls. per day through ¾-in. choke.
Texas Gulf Prod. Co.'s No. 12-A Kirby, 613 ft. N of S line, 85 ft. W of E line, W of Humble O. & R. Co.'s No. 8-B Kirby.
Drlg. lime 5,334 ft.
Texas Gulf Prod. Co.'s No. 2 Fitz-Meadows, 381 ft. S of N line, 50 ft. W of E line of T. S. Fitz lot.
Cmtd. csg.; T.D. 4,563 ft.
Yount Lee Oil Co.'s No. 30 Chambers County School Land, 50 ft. N of S line, direct offset to Sun Oil Co.'s No. 11.
Drlg. shale 957 ft.

**LOST LAKE—CHAMBERS COUNTY**

Pure Oil Co.'s No. 19 Mays, 400 ft. SE of No. 11, 400 ft. SW of No. 14, E. H. R. Wallace Sur.
7-in. csg.; T.D. 2,460 ft.

**BIG CREEK—FORT BEND**

Trans State Oil Co.'s No. 1 B. J. Wheat, 108 ft. N of S cor. of J. F. Ahlers lease and 88 ft. E at right angles, W. Young Sur.
Rig up.

**BOLING—FORT BEND COUNTY**

Irwin Larsen et al's No. 1 J. R. Farmer, 100 ft. NW and 100 ft. SW from E cor. of 125-ac. lease, James Scott Sur.
Location.
Midland Oil Co.'s No. 1 P. F. Coulter, 150 ft. from S line, 4,174 ft. from W line of 100-ac. tract, Miller League No. 2.
Set screen; T.D. 4,186 ft.
Navarro Oil Co.'s No. 2 H. R. Farmer, 362 ft. from SW. line and 150 ft. from SE line of Humble O. & R. Co.'s lease, James Scott Sur.
T.D. 4,058 ft.; P.B. 3,870 ft.; prepare to test.
Sun Oil Co.'s No. 1 H. R. Farmer, 103 ft. from N line, 359.2 ft. from W line of 100-ac. tract, James Scott League Sur.
Rig up.
Yew Development Co.'s No. 1 C. E. Farmer, 400 ft. S and 325 ft. W of the NE cor. of 50-ac. lease, James Scott Sur.
Rig up.

**ORCHARD—FORT BEND COUNTY**

Gulf Prod. Co.'s No. 43 Moore, 350 ft. E along S line of SW cor. of E.M.&G. Co. Sur. and 740 ft. N at R/A to said line of lease, 350 ft. E of No. 2 Moore.
Drlg. sandy shale and lime 5,521 ft.

**THOMPSON—FORT BEND COUNTY**

Gulf Prod. Co.'s No 9 Hammerstram, S. Kennedy Sur
Location.
Gulf Prod. Co.'s No. 10 Hammerstram, S. Kennedy Sur.
Drlg. sand and shale 5,294 ft.
Gulf Prod. Co.'s No. 11 Gubbels.
Drlg. gumbo 930 ft.
Humble O. & R. Co.'s No. 25-A Booth.
Derrick.

**HIGH ISLAND—GALVESTON COUNTY**

Yount Lee Oil Co.'s No. 47 Cade, Fitzsimmons Sur.
Drlg. shale 2,496 ft.

Yount Lee Oil Co.'s No. 2 Louslafot, 150 ft. due S of No. 1, M. Dunman Sur.
13⅜-in. csg. 1,310 ft.
Yount Lee Oil Co.'s No. 2-A Taylor, 85 ft. W of No. 1, A. Dunman Sur.
Derrick.
Yount Lee Oil Co.'s No. 46 Cade, 424 ft. SW of No. 35, 424 ft. NW of No. 36. Fitzsimmons Sur.
Drlg. cap rock 4,963 ft.
Yount Lee Oil Co.'s No. 1 Taylor, D. Dunman Sur., 125 ft. due E of No. 1-A Gordon-Viterbo.
Drlg. shale and lime 4,320 ft.
Yount Lee Oil Co.'s No. 1 Acon & Hughes, 85 ft. E of No. 1 Pabst, on a 3.52-ac. tract, M. Dunman Sur.
Drlg. shale 4,530 ft.
Yount Lee Oil Co.'s No. 1-A Lockhart, 85 ft. W of No. 1 Pabste, on a 5.28-ac. tract, M. Dunman Sur.
T.D. 5,068 ft.; 7-in. csg. 5,028 ft.; testing; I.P. 478 bbls. per day through ¼-in. choke.

**DICKINSON—GALVESTON COUNTY**

Humble O. & R. Co.'s No. 1 Bayou Development Co., 375 ft. S of N line and midway between E and W lines of Lot No. 7, John Sellers Sur.
Location.
Humble O. & R. Co.'s No. 2-B Maco Stewart, 400 ft. from N line of Bayou, 610 ft. from No. 1-B, John Sellers Sur.
Drlg. shale 3,450 ft.
Humble O. & R. Co.'s No. 1 E. E. Anderson, 375 ft. N of S line, and midway between E and W lines of Lot No. 4, John Sellers Sur.
Location.
Humble O. & R. Co.'s No. 1 Fugger, 323 ft. from W line, 522 ft. from N line of lease, J. S. Sherman Sur.
T.D. 8,081 ft.; reaming to set csg.
Humble O. & R. Co.'s No. 1 Townes, 440 ft E of W line, 550 ft. N of N bank of Bayou, B.B.B.&C. Sur.
Drlg. shale 5,090 ft.
Humble O. & R. Co.'s No. 2-A Maco Stewart, 3,324 ft. S along E line of S bank of Bayou and 566 ft. W of E line at R/A John Sellers Sur.
Drlg. shale 7,334 ft.
Stanolind O. & G. Co.'s No. 1 State, 247 varas S of Humble O. & R. Co.'s No. 1 Jones.
Spudded and S.D.
Turnbull & Irwin's No. 1 J. Piazza, 460 ft. W and 250 ft. S of Humble O. & R. Co.'s No. 1 Jones, J. S. Sherman Sur.
T.D. 8,418 ft.; 7-in. csg. 8,256 ft.; washing well.

**ARRIOLA—HARDIN COUNTY**

Houston Oil Co.'s No. 8 fee, Arriola Sur.
Drlg. shale 3,511 ft.
Houston Oil Co.'s No. 6-X fee, 400 ft. SE of No. 4-X, 500 ft. SE of No. 5-X fee.
Coring shale 4,418 ft.
Republic Prod. Co.'s No. 12 fee, 2,599 ft. S of N line, 474 ft. E of W line, of E. Arriola Sur.
Rig up.

**BATSON—HARDIN COUNTY**

Danciger Oil & Refining Co.'s No. 1 Tom Wynne, 250 ft. S, 150 ft. W of Deering's No. 1 Cruse.
Drlg. shale 4,693 ft.
John Deering's No. 1 Conzelman, 2,810 ft. E along N line, from NW cor. of H. Numm Sur. and 35 ft. at R/A, W. Donoho Sur.
Drlg. shale 3,050 ft.
Sterling O. & R. Co.'s No. 1 Doucette, 565 ft. N from NE cor. of Nunn tract thence 565 ft. E at R/A, Wm. Donoho Sur.
T.D. 5,914 ft.; P.B. 5,678 ft.; perforated csg. from 5,600-10 ft. and from 5,640-60 ft.; swbd. dry; abd.
John Deering's No. 1 Bullock, 1,000 ft. N, 17 ft. E of middle line of 30-ac. tract, Bullock tract, Dondo Sur.
T.D. 6,294 ft.; hole heaved to 4,944 ft.; S.D.
John Deering's No. 2 Cruse, 200 ft. E and 50 ft. S of No. 1 Cruse, W. Donaho Sur.
Rig up.

**SARATOGA—HARDIN COUNTY**

Rio Bravo Oil Co.'s No. 11-N Jordit, 200 ft. due W of No. 11-R Jordit.
Clearing location.

**SOUR LAKE—HARDIN COUNTY**

Arlis Pet. Co.'s No. 1 Harkan and Langham.
Dig pits.

**PIERCE JUNCTION—HARRIS COUNTY**

J. S. Abercrombie's No. 5 John Ritter, 259 ft. SW of No. 4, 1,047 ft. NE along SE line out of SW cor. of 160-ac. tract, thence 93 ft. NW at R/A, Sec. 51, J. Hamilton Sur.
Location.
Gulf Prod. Co.'s No. 40 E. R. Taylor, 89.5 ft. along E line of E. R. Taylor's 560-ac. tract from SW cor., south offset to Hamil & Smith's No. 1 Howe.
Rig up.
Gulf Prod. Co.'s No. 39 Taylor, 1,729 ft. S. 75 ft. W of NE cor. of J. Hampton Sur. T.D. 6,263 ft.; I.P. 618 bbls. per day through ¼-in. choke; tubing pressure 1,350 lbs.
Hamil & Smith's No. 1 C. W. Mowery, 50 ft. out of NE cor. of 600-ac. tract, Sec. 53, J. Hamilton Sur.
12½-in. csg. 1,218 ft.; drlg. lime 4,310 ft.
Navarro Oil Co.'s No. 1 Dooley, J. Hamilton Sur.
7-in. csg. 5,866 ft.; T.D. 6,160 ft.; fishing.
Sun Oil Co.'s No. 83 River, Robert Dunman Sur.
Drlg. shale and lime 827 ft.
Sun Oil Co.'s No. 29 Bender, Robert Dunman Sur.
Drlg. shale 3,938 ft.
Texas Co.'s No. 32 Humble, 350 ft. S. 50 ft. W of T.T. Co. and C.O.&G. and 1,718 ft. E of NW cor. of lease, Stevenson Sur. 10-in. csg. 560 ft.

**MYKAWA—HARRIS COUNTY**

Alpha Pet. Co.'s No. 1 Waggenhausen, C of E½ Lot 10, F. J. Rothas Sur.
Drlg. shale 4,104 ft.
Flannigan Drlg. Corp.'s No. 1 Goldman, J. Randon Sur.
Abd. 4,490 ft.
Sterling Oil & Ref. Co.'s No. 1 B. H. Williams, 200 ft. W of E line, 915 ft. N of S line of 29-ac. tract, Wm. Lovett Sur.
Moving in rig.
Hamil & Smith's No. 1 Schep, 1,225 ft. N, 325 ft. E from SW cor. of the most southerly SW cor. of the I. W. Stinde Sur.
Coring shale 4,816 ft.
West Prod. Co.'s No. 1 Forbes, center of Blk. 15, F. J. Rothas Sur.
Derrick.
West Prod. Co.'s No. 1 J. E. Lobit, Blk. 9, F. J. Rothas Sur.
Drlg. shale 3,424 ft.
West Prod. Co.'s No. 1 B. J. Speck, 330 ft. each way from the NW cor. of the tract, W. R. Wilson Sur.
10¾-in. csg. 1,406 ft.; drlg. shale 2,322 ft.

**TOMBALL—HARRIS COUNTY**

Humble O. & R. Co.'s No. 2 Ford, 363 ft. from SE line, 525 ft. from most southerly SW line, E. Smith Sur.
Coring shale 5,561 ft.
Humble Oil & Ref. Co.'s No. 3 Moody, 527 ft. S of N line, 466 ft. E of W line of tract, J. H. Edwards Sur.
T.D. 5,558 ft.; I.P. 2 bbls. of distillate per hr.; R.U. to W.O.
Humble Oil & Ref. Co.'s No. 3 Gebhardt, 1,600 ft. from N line, 466 ft. E of W line of tract, G. W. Hahl Sur.
Top sand 5,543 ft.; 7-in. csg. 5,550 ft.; T.D. 5,553 ft.; I.P. 21 bbls. per hr. through ¼-in. choke.
Humble O. & R. Co.'s No. 1 Laird, 466 ft. from SE line, 20 ft. W of lease, J. Pruett Sur.
Coring shale 5,555 ft.
Humble O. & R. Co.'s No. 2 Martens, 1,534 ft. from S line, 185 ft. from E line of lease, J. House Sur.
Coring sand 5,601 ft.
Shell Pet. Corp.'s No. 1 Rudel, 947 ft. W. 377 ft. N of SE cor. of lease, Wm. Hurd Sur.
Drlg. shale and lime 4,409 ft.
Texas Co.'s No. 1 Mueller, 850 ft. S, 600 ft. W of NE cor. of lease, J. M. Hooper Sur. 10-in. csg. 969 ft.; T.D. 976 ft.

**VANDERBILT—JACKSON COUNTY**

Imperator Oil Co.'s No. 1 Dutton, S C of Lot No. 11, Blk. 25, 450 ft. S of R.R. and 1,350 ft. W line of townsite, Ray Musquiz Sur.
Rigged up and S.D.
Turman Oil Co.'s No. 1 T. H. Miller, 150 ft. each way out of E 50 ac. of Miller 100-ac. tract in Ray Musquiz Sur.
Rigging up.

**BIG HILL—JEFFERSON COUNTY**

Yount Lee Oil Co.'s No. 1-B Pipkin & Davis, 2,225 ft. from E line and 2,285 ft. from N line of survey, Wm. McFadden Sur.
Drlg. lime 2,996 ft.

**FANNETT—JEFFERSON COUNTY**

Gulf Prod. Co.'s No. 5 Junker.
Drlg. sand rock 3,769 ft.

**CLEVELAND—LIBERTY COUNTY**

Black Gold Pet. Oil Corp.'s No. 2 R. D. McDonald, 466 ft. W of most westerly E line and 466 ft. N of most northerly S line of survey, 933 ft. W of Gulf Prod. Co.'s No. 7-C Kirby Lbr. Co., T. Devers Sur.
Derrick.
Gulf Prod. Co.'s No. 2 McDonald, 3,569 ft. W along S line from most easterly SE cor. of survey and 1,286 ft. N at right angles, Charles Smith Sur.
Location.
Gulf Prod. Co.'s No. 9-C Kirby Lbr. Co., 1,967 ft. N, 1,400 ft. E from the NE cor. of J. S. Eldridge Sur. in the John Pleasant Sur.
T.D. 5,832 ft.; recovered 50 ft. of water and mud, 130 ft. of oil on ¼-in. choke; 300 lbs. pressure.
William J. Colegrove et al's No. 1 State School Land & Dev. Co., 446 ft. from W line and 170 ft. from S line of survey, Clayton Harper Sur.
Location.

**ESPERSON—LIBERTY COUNTY**

General Crude Oil Co.'s No. 21 Esperson.
T.D. 6,631 ft.; drill stem stuck.
General Crude Oil Co.'s No. 1 W. D. Kay, Malcolm Duncan Sur., 1,537 ft. along N T.D. 7,030 ft.
General Crude Oil Co.'s No. 10 Davis, 2,000 ft. from E line, 660 ft. from S line of D. Kokernut Sur.
Drlg. shale 7,205 ft.

**HANKAMER—LIBERTY COUNTY**

Cretaceous Oil Co.'s No. 3 Ezzell, 450 ft. W of E line of tract, Levi Barrow Sur.
T.D. 2,640 ft.; 7-in. csg. 2,555 ft.
Eljean Oil Co.'s No. 1 Ezzell, 1,325 ft. from N. 150 ft. from E line of Ezzell 175-ac. tract.
T.D. 2,621 ft.; 7-in. csg. 2,593 ft.; swbd., well would not flow; csg. collapsed while bailing; milled out at 2,200 ft.; drlg. shale 2,475 ft.
Gulf Prod. Co.'s No. 1-B W. L. Bingle, 159 ft. E along S line of H.&T.C. Sur., thence 378 ft.
Drlg. sand 4,260 ft.
Gulf Prod. Co.'s No. 19 E. W. Boyt, 100 ft. from W line, 298 ft. S of No. 18, Amos Allen Sur.
Drlg. sand 2,651 ft.
Gulf Prod. Co.'s No. 20 E. W. Boyt, 1,235 ft. along W line of survey, 159 ft. from W line at R/A, Amos Allen Sur.
Location.
Gulf Prod. Co.'s No. 21 E. W. Boyt, 110 ft. from W line of Amos Allen Sur.
Location.
Gulf Prod. Co.'s No. 22 Boyt, Allen Sur.
Drlg. shale 1,270 ft.
Jones Drlg. Co.'s No. 1 Ezzell, 1,050 ft. S of N line, 150 ft. W of E line of Levi Barrow Sur.
Cmtd. csg. 3,621 ft.

Will Strozier et al's No. 1 Ezzell, 700 ft. N of S line, 150 ft. W of E line of Levi Barrow Sur.
Derrick.

**HULL—LIBERTY COUNTY**

Fondren & Snowden's No. 2 Humble-Hooks, 50 ft. from S line, 300 ft. NW of No. 1, J. Devore Sur.
Drlg. shale 1,310 ft.

**VAN VLECK—MATAGORDA COUNTY**

Skelly Oil Co.'s No. 3 Cobb "B," 2,750 ft. from NW line, 2,900 ft. from SW line of M. Cummins Sur.
Derrick.

**MARKHAM—MATAGORDA COUNTY**

Hamil & Hamil's No. 1 Hardy, 150 ft. E and 150 ft. S from NW cor. Hardy lease, H. Parker Sur.
Coring shale 3,887 ft.

**MOSS BLUFF—LIBERTY COUNTY**

Gulf Coast Sulphur Co.'s No. 1 McManus, 588 ft. from E, 1,650 ft. from N line of W. A. tract, B. M. Spinks Sur.
Location.

**CONROE—MONTGOMERY COUNTY**

Humble Oil & Ref. Co.'s No. 1 Taylor, 466 ft. from S line, 208 ft. from E line of lease, J. H. Davis Sur.
Abd. 5,215 ft.

**SPLENDORA—MONTGOMERY COUNTY**

Bryce McCandless et al's No. 1 Texas Long Leaf Lbr. Co., 330 ft. from N and E lines of the W½ of Blk. No. 8, Walker County School Land Sur.
Derrick.

**ORANGE—ORANGE COUNTY**

Trio Oil Co.'s No. 1 D. S. Comier, 69 ft. W of E line and 39 ft. S of N line of 6.83-ac. tract in W. M. Dyson Sur.
2,912 ft.; no report.

**PORT NECHES—ORANGE COUNTY**

Texas Co.'s No. 4-B Polk, 750 ft. S and 1,450 ft. W from NE cor. of lease, Jacob Beaumont Sur.
Location.
Texas Co.'s No. 5-B Polk, 750 ft. S and 850 ft. W from NE cor. of lease, Jacob Beaumont Sur.
Drlg. gumbo and boulders 1,716 ft.
Texas Co.'s No. 6-B Polk, 750 ft. S and 250 ft. W from NE cor. of lease, Jacob Beaumont Sur.
Location.

**LIVINGSTON—POLK COUNTY**

T. A. Carlton Oil Co.'s No. 2 Watt, 695 ft. N of No. 1, 365 ft. from E and W lines of lease, A. Viesca Sur.
Location.
Gem Oil Co.'s No. 3 Watt, 300 ft. S line, 330 ft. W line of lease, A. Viesca Sur.
10¾-in. csg. 468 ft.; drlg. sand 600 ft.
Gem Oil Co.'s No. 6 Davis & Holmes, 662 ft. from W and 662 ft. from N line of survey, A. Viesca Sur.
Rig up.
Humble O. & R. Co.'s No. 9 Granbury & Smith, 2,000 ft. from N and 466 ft. from E lines of Sec. 10, A. Viesca Sur.
Cmtd. csg. 506 ft.
Sun Oil Co.'s No. 3 Pratt, 330 ft. W and 288 ft. S from SE cor. of T. A. Carlton Oil Co.'s 30-ac. lease, A. Viesca Sur.
T.D. 4,255 ft.; to make drill stem test.

**SAN FELIPE—WALLER COUNTY**

Buck Oil Co.'s No. 2 Vaughn, 300 ft. S, thence 200 ft. E from Seaport Oil Co.'s No. 1 Vaughn, J. McFarland Sur.
Rig up.

**GRETA—REFUGIO COUNTY**

Hewitt & Daugherty's No. 12 Lambert.
Rig up.
Humble O. & R. Co.'s No. 20 J. F. B. Heard, 466 ft. from N line, 810 ft. from N line, J. H. Peoples Sur.
T.D. 4,404 ft.; top sand 4,399 ft.; 7-in. csg. 4,390 ft.; I.P. 848 bbls. per day through ¼-in. choke.
Humble O. & R. Co.'s No. 1 Marberry, 4,558 ft. from S line, 466 ft. from W line of John Denn Sur.
Abd. 6,510 ft.

**REFUGIO—REFUGIO COUNTY**

Houston Oil Co.'s No. 27 Rooke, 660 ft. S of No. 1 McMullen Sur.
Drlg. shale 3,175 ft.
Houston Oil Co.'s No. 26 Rooke, 660 ft. W of No. 24 Rooke.
Derrick; temp. abnd. location.
Houston Oil Co.'s No. 24 Rooke, 660 ft. NW of No. 21, McMullen Sur.
T.D. 4,948 ft.; I.P. 500 bbls., ¼-in. choke.
Houston Oil Co.'s No. 25 Rooke, 660 ft. W of No. 23, McMullen Sur.
T.D. 4,928 ft.; I.P. 480 bbls., ¼-in. choke.
United Gas Co.'s No. 20 Lambert.
Drlg. shale 1,410 ft.

**TOM O'CONNOR—REFUGIO COUNTY**

Quintana Oil Co.'s No. 9-A O'Connor, 933 ft. SW of No. 7-A, Swisher Sur.
Drlg. shale 3,927 ft.
Quintana Oil Co.'s No. 10-A O'Connor, 4,000 ft. from W line, 3,500 ft. from NW line, Sec. 3, Swisher Sur.
Drlg. shale 4,113 ft.

**McFADDIN-O'CONNOR DISTRICTS—VICTORIA AND REFUGIO COUNTIES**

Texas Co.'s No. 9 McFaddin, 1,850 ft. N. 2 deg., 45 ft. S from No. 2.
T.D. 6,208 ft.; 7-in. csg. 6,196 ft.
Houston Oil Co.'s No. 1 Fagan, 330 ft. from Guadalupe River on the Fagan Island, F. and J. M. Rodrigues Sur., SW of McFaddin Field.
S.D. 1,027 ft.

**CLAY CREEK—WASHINGTON COUNTY**

Sun Oil Co.'s No. 13 Janner, 400 ft. NW of No. 9, 565 ft. NE of No. 10, J. F. Perry Sur.
Drlg. 1,802 ft.

**LOUISE—WHARTON COUNTY**

Pure Oil Co.'s No. 2 McIntyre, 485 ft. NE, 880 ft. SE from most NE cor. of 317.22-ac. lease, Morris & Cummings Sur.
Derrick.
Pure Oil Co.'s No. 1 John Macha, 318 ft. from NW line and from SE line of F. Walnut Sur., and 467 ft. from NE line of 101.53-ac. lease, M.&C. Sur. No. 25.
T.D. 5,160 ft.; 7-in. csg. 5,118 ft.

Pure Oil Co.'s No. 3 Stewart, 1,000 ft. SW and 318.25 ft. SE from N cor. of W. L. Stewart's 160-ac. tract, Morris and Cummings Sur. No. 25.
I.P. 38 bbls. in 7 hrs. through ¼-in. choke; T.P. 316 lbs.; T.D. 5,166 ft.

**BAY JUNOP—TERRABONNE PARISH**

Texas Co.'s No. 6-B State, 458 ft. S. 493 ft. E of NW cor. of Sec. 34-21s-14e.
Drlg. sandy lime 7,854 ft.

**BAY ST. ELAINE—TERREBONNE PARISH**

Texas Co.'s No. 3 School Board, Sec. 16-22s-15e.
Location.
Texas Co.'s No. 10 State, 4,550 ft. E and 4,595 ft. S of NW cor. of Sec. 17-22s-15e.
Location.

**CALLIOU ISLAND—TERRABONNE PARISH**

Texas Co.'s No. 20 Calliou Island.
T.D. 4,119 ft.; blowing gas and little water; tried to blow out.
Texas Co.'s No. 22 Calliou Island.
T.D. 4,926 ft.; P.B. 2,600 ft.

**SOUTH LOUISIANA FIELDS**

**BLACK BAYOU—CAMERON PARISH**

Shell Pet. Corp.'s No. 22 Watkins, 2,230 ft. W and 1,340 ft. S of NE cor. Sec. 18-12s-12w.
Drlg. shale 3,478 ft.
Shell Pet. Corp.'s No. 21 Watkins, 1,570 ft. E of NW cor. Sec. 17-12s-12w.
T.D. 4,084 ft.; attempted drill stem test but failed.
Shell Pet. Corp.'s No. 3 State.
T.D. 6,159 ft.; S.D.

**BOSCO—ACADIA AND ST. LANDRY PARISHES**

Superior Oil & Prod. Co.'s No. 1 E. Arceneaux, 2,027 ft. E of NW cor. of Sec. 25-8s-3e.
Drlg. shale and sand.
Superior Oil & Prod. Co.'s No. 1 M. Benoit, 1,165 ft. W of SE cor. of Sec. 34-8s-3e.
Drlg. shale 1,451 ft.
Superior Oil Prod. Co.'s No. 2 Domingua, 451 ft. N, 2,053 ft. E of SW cor. of Sec. 26-8s-3e.
Drlg. sand and shale 1,586 ft.
Superior Oil & Prod. Co.'s No. 8 Hernandez, 105 ft. E, 219 ft. N of SW cor. of NW¼ Sec. 34-8s-3e.
Drlg. sand and shale 7,655 ft.
Superior Oil Prod. Co.'s No. 5 Hernandez, 1,424 ft. S, 350 ft. W of NE cor. of NW¼ Sec. 34-8s-3e.
Drlg. sandy shale 5,954 ft.
Superior Oil Prod. Co.'s No. 2 Richard, 2,916 ft. S, 799 ft. W of NE cor. of Sec. 34-8s-3e.
Drlg. broken sand 7,956 ft.
Superior Oil Prod. Co.'s No. 3 Johnson, 2,958 ft. S, 1,325 ft. W of NE cor. of Sec. 34-8s-3e.
Drlg. sand 7,968 ft.
Superior Oil Prod. Co.'s No. 8 Larcade, 1,773 ft. S, 1,662 ft. E of NW cor. Sec. 35-8s-3e.
T.D. 8,705 ft.; 7-in. csg. 8,684 ft.; I.P. 651 bbls. per day through 10/64-in. choke; T.P. 1,060 lbs., C.P. 1,310 lbs.
Superior Oil Prod. Co.'s No. 9 Larcade, 2,755.83 ft. N. 1,936.23 ft. W of SE cor. of Sec. 34-8s-3e.
T.D. 8,747 ft.; 7-in. csg. 8,742 ft.; I.P. 463 bbls. per day through 9/64-inch. choke; T.P. 1,575 lbs., C.P. 1,450 lbs.
Superior Oil Prod. Co.'s No. 1 S. Martinez, 3,672.1 ft. S, 2,933 ft. E of NW cor. Sec. 36.
T.D. 8,606 ft.; 7-in. csg. 8,582 ft.; I.P. 897 bbls. in 24 hrs.
Superior Oil Prod. Co.'s No. 2 Le Blanc, 1,498 ft. S, 937.89 ft. W of NE cor. Sec. 33-8s-3e.
Drlg. shale and lime 7,400 ft.
Superior Oil Prod. Co.'s No. 2 E. Mire, 1,939.97 ft. S, 916.82 ft. W of NE cor. Sec. 33-8s-3e.
Coring sand and shale 8,538 ft.
Superior Oil Prod. Co.'s No. 2 Falls, 330 ft. N, 1,796 ft. W of SE cor. of Sec. 27-8s-3e
T.D. 7,847 ft.; I.P. 755 bbls. through 10/64-in. choke; tubing pressure 1,250 lbs.

**ASCENSION PARISH**

Athens Oil Co.'s No. 1 United Land, 1,600 ft. S, 1,530 ft. W of NE cor. Sec. 16-10s-4e.
Rig up.
Humble O. & R. Co.'s No. 5 Community, 228 ft. SW of NE line of section, 200 ft. at R/A to east bank of river, Sec. 33-10s-2e.
Drlg. shale 5,144 ft.
Humble O. & R. Co.'s No. 4 Community, 4,825 ft. from NE cor. and 283 ft. S of N line at R/A, Sec. 33-10s-2w.
Digging cellar.

**CAMERON MEADOWS—CAMERON PAR.**

Burton-Sutton Oil Co.'s No. 6 School Lot, 423 ft. E of No. 5.
Drlg. shale 1,870 ft.
Burton-Sutton Oil Co.'s No. 4 School Land, 2,891 ft. W and 150 ft. N of SE cor. of Sec. 16-4s-12w.
Derrick.

**CHOCTAW DOME—IBERVILLE PARISH**

Standard Oil Co.'s No. 1 Myrtle, 900 ft. N and 550 ft. W of SE cor. of SW¼ of Sec 52-9s-11e.
Rig up.
Standard Oil Co.'s No. 5 Gay, 2,450 ft. S and 425 ft. E of NW cor. of NE Sec 32-9s-11e.
7-in. csg. 4,510 ft.; T.D. 4,581 ft.

**DOG LAKE—TERREBONNE PARISH**

Texas Co.'s No. 17 State.
Drlg. water sand 5,410 ft.

**FOUR ISLE—TERREBONNE PARISH**

Texas Co.'s No. 5 State, 385 ft. S, 2,327 ft. E of NW cor. of Sec. 24-21s-16e.
Location.
Texas Co.'s No. 9 L. L. and E., 1,838 ft. E, 2,243 ft. E of NW cor. Sec. 24-21s-16e.
Location.

**GARDEN ISLAND BAY—TERREBONNE PARISH**

Texas Co.'s No. 13 State, 3,391 ft. S and 1,604 ft. W of NE cor. Sec. 107-23-32.
Rig up.

**GUEYDAN—VERMILLION PARISH**

Pure Oil Co.'s No. 6, Alliance Trust, 467 ft. E, 1,787 ft. S line of lease, Sec. 34-11s-1w.
T.D. 9,379 ft.

**HACKBERRY—CAMERON PARISH**

Gulf Prod. Co.'s No. 18 Erwin, 271 ft. W and 722 ft. N of SE cor. of Sec. 13-12s10w.
Drlg. sand and pyrites 5,793 ft.
Sutton Oil Co.'s No. 2 Portier, 717 ft. S and 50 ft. W of NW cor. SW¼ SE¼ Sec. 22-12s-10w.
Drlg. shale 3,827 ft.
Texas Co.'s No. 14 State, 500 ft. SE of No. 13, Sec. 13-12s-10w.
Drlg. shale 5,429 ft.
Texas Co.'s No. 15 State, Sec. 13-12s-10w.
Drlg. shale 6,210 ft.
Union Sulphur Co.'s No. 3 Humble (W.O.).
Drlg. sandy shale 5,978 ft.
Yount Lee Oil Co.'s No. 13 Gulf Land, Sec. 14-12s-10w.
Drlg. shale 4,910 ft.
Yount Lee Oil Co.'s No. 1-A Gulf Land, 2,000 ft. S and 50 ft. E of the NW cor. of Sec. 22-12-10.
Rig up.

**NEW IBERIA—IBERIA PARISH**

Iberia Oil Corp. and T. D. Spell's No. 1 Bernard, 150 ft. E of No. 1, Sec. 54-12s-7e.
S.D. 3,846 ft.; salt.

**IOWA—CALCASIEU AND JEFF DAVIS**

Shell Pet. Corp.'s No. 16 Heyd, 990 ft. S, 998 ft. W of NE cor. Sec. 13-9s-7w.
Rig up.
Shell Pet. Corp.'s No. 4 Tuten, 330 ft. S, 1,319 ft. W of NE cor. SE¼ Sec. 13-9s-7.
Drlg. sandy shale 5,155 ft.
Shell Pet. Corp.'s No. 2 Adrain.
Redrig. hole 7,028 ft.
Shell Pet. Corp.'s No. 4 Adrain, 1,650 ft. S, 330 ft. E of NW cor. of lease.
T.D. 6,716 ft.; I.P. 1,091 bbls. per day.

**JENNINGS—ACADIA PARISH**

Port City Oil Co.'s No. 15 Jennings-Haywood, 108 ft. E, 368 ft. S of NW cor. Sec. 41-9s-2w.
Drlg. shale 1,730 ft.
Yount Lee Oil Co.'s No. 7 Housslere-Latriele.
Coring sand 7,480 ft.; (corrected).

**LAKE BARRE—TERREBONNE PARISH**

Texas Co.'s No. 14 Lake Barre.
Drlg. anhydrite 3,932 ft.
Texas Co.'s No. 15 Lake Barre.
S.D. 3,921 ft.

**LAKE PELTO—TERREBONNE PARISH**

Texas Co.'s No. 12 Lake Pelto.
Reaming 5,184 ft.

**LEESVILLE—LAFOURCHE PARISH**

Gulf Prod. Co.'s No. 6 Allen Lane, Sec. 26-21s-22e.
Drlg. sand 1,555 ft.
Gulf Prod. Co.'s No. 12 Bernard, Sec. 26-21s-22e.
Location.
Gulf Prod. Co.'s No. 10 Bernard, 1,833 ft. E, 958 ft. S of NW cor. Sec. 26-21s-22e.
Derrick.
Emerald Pet. Co.'s No. 10, State, west bank, 300 ft. S of well No. 1.
Location.
Emerald Pet. Co.'s No. 11 State, east bank, 227 ft. N of well No. 1.
Location.
Emerald Pet. Co.'s No. 12 State, east bank, 250 ft. S of well No. 1.
Location.
Texas Co.'s No. 32 Leesville, 890 ft. S, 2,484 ft. W of NE cor. SE¼ Sec. 27-21s-22e.
Location.
Texas Co.'s No. 33 Leesville, 1,590 ft. S, 2,484 ft. W of NE cor. SE¼ Sec. 27-21s-22e.
Rig up.
Texas Co.'s No. 36 Leesville, 476 ft. S, 385 ft. E of NW cor. SW¼ Sec. 26-21s-22e.
Building foundation.
Texas Co.'s No. 37 Leesville, 1,266 ft. N, 103 ft. W of SE cor. NE¼ Sec. 27-21s-22e.
Building foundation.
Texas Co.'s No. 27 Leesville.
Drlg. water sand 3,710 ft.

**LOCKPORT—CALCASIEU PARISH**

Union Sulphur Co.'s No. 6 Moss, located between No. 2 and No. 5 (W.O.).
Prepare to core deeper; T.D. 6,644 ft.

**STARKS—CALCASIEU PARISH**

Gulf Prod. Co.'s No. 37 Lutcher-Moore, 250 ft. E and 775 ft. N of SW cor. of Sec. 19-10s-12w.
Abd. 4,235 ft.

**PORT BARRE—ST. LANDRY PARISH**

Gulf Prod. Co.'s No. 12 Wilson Cochran, Sec. 4-5s-6e.
Drlg. sand, shale and lime 3,842 ft.
Port Barre Oil Co.'s No. 2 Sybil, 3,980 ft. N easterly along section line, thence 55 ft. at R/A to the east, Sec. 20-4s-5e.
S.D. 3,762 ft.

**ROANOKE—JEFERSON DAVIS PARISH**

Classel et al's No. 1 La. Irrigation Mill Co., 695.5 ft. E and 475 ft. N of SW cor. Sec. 1-9s-4w.
Location.
Humble O. & R. Co.'s No. 1 Clayton, 2,333 ft. from S line, 440 ft. from E line, Sec. 10-9s-4w.
Drlg. shale 2,250 ft.
Humble O. & R. Co.'s No. 2 C. N. Taylor, 1,320 ft. E, 440 ft. S of NW cor. of SW¼ Sec. 12-9s-4w.
Rig up.
Humble O. & R. Co.'s No. 1 Nelson Thomas, 880 ft. W of No. 2 Kratzer, 440 ft. N and W of SE cor. of 200-ac. tract.
Drlg. shale 8,197 ft.
Humble O. & R. Co.'s No. 2-B Devilbiss, 1,127 ft. W of No. 1-B, 440 ft. S of N line of S½ of Sec. 11-9s-4w.
Drlg. shale 9,396 ft.
Shell Pet. Corp's No. 1 Jarnigan, 330 ft. E, 660 ft. S, NW cor. Sec. 12-9s-4w.
Drlg. shale 9,625 ft.
Shell Pet. Corp.'s No. 3 Kratzer, 1,320 ft. E and 440 ft. N of SW cor. of lease.
Running liner; T.D. 7,597 ft.
Shell Pet. Corp.'s No. 1-B Kratzer, 660 ft. N, 330 ft. E of SW cor. of SW¼ Sec. 1-9s-4w.
Drlg. sandy lime 7,995 ft.
Shell Pet. Corp.'s No. 4 Kratzer.
Drlg. lime 6,553 ft.

**SULPHUR—CALCASIEU PARISH**

Union Sulphur Co.'s No. 810 fee, 1,955 ft. S. 440 ft. E of NW cor. Sec. 29-9s-10w.
9⅝-in. csg. 2,623 ft.; T.D. 2,668 ft.
I.P. 634 bbls. per day.
Union Sulphur Co.'s No. 1 Noble (W.O.).
Pumping.
Union Sulphur Co.'s No. 3 Kelly.
Drlg. shale and lime 5,926 ft.
Union Sulphur Co.'s No. 809 fee.
T.D. 3,461 ft.; I.P. 700 bbls. per day.

**WHITE CASTLE—IBERVILLE PARISH**

Shell Pet. Corp.'s No. 8 Wilbert.
T.D. 1,969 ft. set whipstock.
Shell Pet. Corp.'s No. 1 White Castle Shingle Co., 1,330 ft. W, 100 ft. S from NE cor. of lease.
S.D. 4,234 ft.
Shell Pet. Corp.'s No. 1 Adams, 2,340 ft. N. 100 ft. E of SW cor. of lease.
Coring 7,992 ft

**MISCELLANEOUS WILDCATS**

**TEXAS**

**AUSTIN COUNTY**

Deering & Kayser's No. 1 P. A. McClinton, 1,100 ft. from NW line and C NE and SW of 115-ac. tract in Thomas Bell Sur.
Drlg. shale 1,710 ft.
Paul English et al's No. 1 Felix Guhn, 1,000 ft. S, 360 ft. E from NW cor. of 71-ac. tract, D. Chomel Sur., 1 mile SE of Kinney.
Rig up.

**BRAZORIA COUNTY**

Amerada Pet. Corp.'s No. 2 Houston Farms Dev. Co., 2,150 ft. SE, 5,800 ft. SW of N cor. of B.B.B.&C. Sur., in the Perry & Austin Sur.
Rig up.
George Strake's No. 2 Truska, 991 ft. W of No. 1, H.T.&B. Sur., Sec. 7.
S.D. 6,000 ft.
Showers & Moncrief's No. 1 Hughey, 5,500 ft. NW of discovery well, in center of Lot 18, H.T.&B. Sur., Sec. 29, Abst. 292.
Location.
Texas Co.'s No. 1 Freeport Sulphur Co., 2,764 ft. N, 1 deg., 40 ft. W and 1,134 ft. S, 38 deg., 20 ft. W of NW cor. of S. F. Austin Sur., Abst. No. 35, being in the Conception Areola Sur.
T.D. 4,186 ft.; heaving shale.
Quintan Pet. Co.'s No. 1-B G. L. Wood, 2,778 ft. from W line and 5,555 ft. from S line of 1,483-ac. lease, Thomas Alsbury Sur.
Derrick material.

**CALHOUN COUNTY**

Continental Oil Co.'s No. 2 American National Realty Co., 660 ft. from NW line, 660 ft. from NE line of Sec. 6, Blk. C, Pedro Garcia Sur.
S.D. 6,522 ft.

**CHAMBERS COUNTY**

R. A. Mason et al's No. 1 R. M. White, 3,125 ft. N of S line, 466 ft. W of E line of James McGahey Sur.
Bldg. road.
South Gulf Oil Co.'s No. 1 J. T. White, Luke Brian Sur., 460 ft. from N line, 460 ft. from W line of 47.9-ac. tract.
Drlg. rock 6,988 ft.

**FAYETTE COUNTY**

Lewis Franklin's No. 1 V. Dybala, center of 75-ac. lease, A. Thompson Sur.
Location.
Walter C. Keeble's No. 1 Frank Weinkuhn, 150 ft. E of W line, 150 ft. S of N line of 150-ac. tract, F. A. Zimmershield Sur.
Location.

**FORT BEND COUNTY**

C. B. Bunte's No. 1 Winston, 1,495 ft. E of W line, 2,381 ft. N of S line of 350.6-ac. tract, S. Isaacs Sur.
Location.
W. A. Shafer et al's No. 1 V. B. Bortash, 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur.
S.D. 2,900 ft.
George White et al's No. 1 M. M. Cravins, 1,000 ft. from N, 300 ft. W of SW cor. of survey, B.B.B.&C. Sur. No. 8.
Rig up.

**GALVESTON COUNTY**

Coast Pet. Co.'s No. 1 Stewart, 3,416 ft. S, 200 ft. E of NW cor. of 143-ac. tract, W. K. Wilson Sur.
Prepare to spud.
Gillock Pet. Co.'s No. 2 Maco Stewart, 900 ft. N and 150 ft. W of No. 1, Alex Farmer Sur.
T.D. 1,500 ft.; S.D.

**GRIMES COUNTY**

Hubert Holt et al's No. 1 Simon Fuqua, 1,200 ft. N of S line and 400 ft. W of E line of 177-ac. lease and survey, Moses Evans Sur.
S.D. 2,080 ft.
Dr. Marshall et al's No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
S.D. 2,005 ft.
Patton et al's No. 1 Yeager, 1,000 ft. W of E line, 170 ft. S of N line of 53-ac. tract and survey, A. Russelle Sur., NW of Iola Sur.
S.D. 1,000 ft.

**HARDIN COUNTY**

Kirby Pet. Co.'s No. 3 Kirby, 2,330 ft. W, 9,850 ft. S of NE cor. of J. Stephenson Sur.
Drlg. shale 4,176 ft.

**HARRIS COUNTY**

Herbert-Still & Hooper's No. 1 Racker, 990 ft. E of W line, 4,290 ft. N of S line of J. C. Ogburn Sur.
Spudded.
T. S. F. Oil Co.'s No. 1 J. B. Hine, Arthur McCormick Sur., Abst. 46.
S.D. 3,916 ft.
C. C. Foster et al's No. 1 H. K. Johnson, 2,000 ft. from S line and C of E and W lines of G.C.&S.F. Sur.
Drilled 25 ft. and S.D.

Stanolind Oil & Gas Co.'s No. 1 F. J. Burkey, C of Lot 15, Blk. 105, H.T.&B. Sur. No. 5.
Location.
Stanolind Oil & Gas Co.'s No. 1 C. F. Gibson, C of Lot 9, Blk. 41, H.T.&B. Sur. No. 5.
Location
Stanolind Oil & Gas Co.'s No. 1 J. W. Horlow, C of Lot 10, Blk. 82, H.T.&B. Sur. No. 5.
Location
Stanolind Oil & Gas Co.'s No. 1 Ed Wells, C of Lot 3, Blk. 146, H.T.&B. Sur. No. 5.
Location.
Stanolind O. & G. Co.'s No. 1 fee land, 330 ft. S, 300 ft. E of NW cor. of 20-ac. tract Sur., Sec. No. 5.
T.D. 5,000 ft.; running 9⅝-in. csg. to test.
West Prod. Co.'s No. 1 Woodburn, 1,320 ft. E of W line, 2,145 ft. N of S line of survey, A. Whitlock Sur.
Drlg. shale 6,925 ft.

**JACKSON COUNTY**

A. M. Harris' No. 1 Whitley, 800 ft. out of SE cor. of F. G. Keller Sur.
Location.
Shell Pet. Corp.'s No. 1 W. W. McCrary, 460 ft. out of SE cor. of 50-ac. tract, A. Kountze Sur.
Coring sand 7,410 ft.

**JASPER COUNTY**

Marathon Oil Co.'s No. 1 Jasper County Lumber Co., 330 ft. out of NE cor. of 176.5-ac. tract 5 miles SE of Jasper, T. C. Holmes Sur.
Location.

**JEFFERSON COUNTY**

Humble O. & R. Co.'s No. 1 J. T. White, 330 ft. out of SW cor. of T.&N.O.R.R. Sur. No. 370.
Location.
Sun Oil Co.'s No. 1 Hebert & Braussard, 4,890 ft. NW along SW line and 660 ft. NE at right angles to SW line, B. Blackman Sur., Abst. No. 2.
Rig up.

**LIBERTY COUNTY**

R. M. Bruner et al's No. 1 N. Bell, 150 ft. from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No. 4.
Rigging up.
Extension Oil Co.'s No. 1 J. A. Lovett, 330 ft. from E and 600 ft. from S line of lease.
P. P. Deevers Sur.
S.D. 4,048 ft.
J. W. Frazier et al's No. 2 Lynott & Buffum, 466 ft. from N and E lines of 60-ac. tract in extreme SE part of survey, James Robeson Sur.
Drlg. shale 1,256 ft.
Liberty-Independent Oil Co.'s No. 1 J. M. Neal, 3,550 varas from E line and 595 varas from N line of Samuel Strong Sur.
S.D. 4,110 ft.
A. L. Maxwell's No. 1 M. P. Hinclift, 300 ft. from E line and 1,000 ft. from the N line of survey, H.&T.C. Sur., Sec. 10s.
S.D. 5,341 ft.
Thomas et al's No. 1-A Eicke, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
T.D. 5,047 ft.; 6⅝-in. csg. at 5,039 ft.
Turnbull & Irwin's No. 1 Cox, 1,000 ft. from the E line and 200 ft. from S line of 108.2-ac. lease, F. J. G. Smiley Sur.
Location

**MATAGORDA COUNTY**

Continental Oil Co.'s No. 1 Felfe, J. S. Criswell Sur., 3,000 ft. E of W line, 2,800 ft. N of S line of survey.
Coring sandy shale 4,021 ft.
Dr. Griffith's No. 1 fee, 3,000 ft. from E line and 3,000 ft. from W line of Wm. H. Bell Sur.
Rig up and S.D.
Helmerich & Payne's No. 1 Hawkins, 850 ft. S, 70 deg. W of Cockburn Oil Co.'s No. 6 Hawkins.
Location.
Horace M. Smith, Inc.'s No. 1 Wadsworth ranch, 150 ft. out of S cor. of Lot No. 5, Blk. S. R. Fisher Sur.
T.D. 8,418 ft.; running 7-in. csg.

**MONTGOMERY COUNTY**

Travis Baker et al's No. 1 Foster Estate, 1,200 ft. E of W line and 700 ft. S of N line of Blk. No. 50, J. M. De La Garza Sur.
Derrick.
Charles B. Gohlson's No. 1 Aaron Parks, 250 ft. from S line, 200 ft. from E line of Parks 139-ac. tract, J. Lindley Sur.
T.D. 3,769 ft.; tested 2 joints of drlg. mud, 8 joints drlg. mud, cut with oil; preparing to run 7-in. csg.
Paul Sanderson, trustee's No. 1 Texas Long Leaf Lbr. Co., 3,500 ft. W, 1,750 ft. S of NW cor., Wm. Barker Sur.
Location.

**ORANGE COUNTY**

Blue Line Oil Co.'s No. 1 Godwin, Richard Hallew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 20-ac. tract.
S.D. 2,770 ft.
Ellis Oil Co.'s No. 1 G. W. Pell, 100 ft. from N and 300 ft. from W line of Pell tract in the J. M. Henerie Sur.
S.D. 1,720 ft.
Dick Schwab's No. 1 East Texas Canal Co., 330 ft. from the N and W lines of 234-ac. tract, John Jett Sur.
Drlg. shale 2,921 ft.

**POLK COUNTY**

Howard Daily et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 16 miles NE of Corrigan.
S.D. 60 ft.
J. F. Anderson's No. 1 E. L. Duke (O.W.D. D.), 400 ft. from E and 350 ft. from S of SW cor. of P. Michelick 50-ac. lease, Abst. 59, P. J. Mineral Sur.
Waiting on a new mud pump; T.D. 5,304 ft.
J. W. Leggett et al's No. 1 Bergman, C of 294-ac. tract, or 1,100 ft. W of H.E.&W.T. R.R., J. T. Pinkney Sur.
Rig up.

Dick Schwab's No. 1 Lynch, 330 ft. out of NW cor. of 200-ac. tract in the George Jameson Sur.
Location.

**REFUGIO COUNTY**

Conroe Drlg. Co.'s No. 1 Weisa, NE cor. NW¼ Sec. 40, Bonnieview Subd.
Coring 5,573 ft.
Cecil Hagen et al's No. 1 Edith Clarkson, 1,736 ft. from N line, 3,820 ft. from E line of J. Coughlin Sur.
Location.
Magnolia Pet. Co.'s No. 1 Woods, 330 ft. from S and W lines of S. Turner Sur.
Heaving shale 7,645 ft.

**ROBERTSON COUNTY**

H. L. Patton's No. 1 H. Ely, located on a 616-ac. tract, A. Manchola Sur.
Drlg. 2,611 ft.

**SAN JACINTO COUNTY**

Shell Pet. Corp.'s No. 1 K. Moore, 5,400 ft. from W line, 1,250 ft. from S line of lease, T. F. De Rumsyor Sur.
Rig up.
Ralph Sturam et al's No. 1 R. B. Love et al, 475 ft. S of N line and 2,000 ft. W of E line of 177-ac. tract, Drury McGee Sur.
Moving in rig.

**TRINITY COUNTY**

Gulf Prod. Co.'s No. 2 Trinity County Lbr. Co., 1,287 ft. S, 1,480 ft. S of the SW cor. of the Stanley & Barrett 99.5-ac. tract, Trinity County School Land Sur.
Location.
Gulf Prod. Co.'s No. 1 Trinity Lbr. Co., 4,500 ft. W of E line, 1,200 ft. N of S line of survey, J. M. Gomez Sur.
Abd. 3,005 ft.

**VICTORIA COUNTY**

Costa Oil Co.'s No. 1 Henderson & Pickering, 330 ft. out of NW cor. of Lot 19, Wm. Rupley Sur.
Location.
Costa Oil Co.'s No. 1 Schovjasa, 330 ft. out of N cor. of Lot No. 14, Wm. Rupley Sur.
Swabbed dry; rerunning screen; T.D. 4,780 ft.
Eastern States Pet. Co.'s No. 1 Williams, 330 ft. out of S cor. of 130-ac. tract, E. Benavides Sur.
Location.
L. A. Gillespie and Superior Oil & Gas Co.'s No. 1 R. W. Brandt, 330 ft. from NE line, 330 ft. from NW line of tract No. 11, Henderson & Pickering Subd., Wm. Rupley Sur.
Cmtd. surface csg.
L. A. Gillespie and Superior Oil & Gas Co.'s No. 1 John Janis, 330 ft. from SW line of survey and on the SE line of Nancy Dean Sur.
Location.
Gillespie and Superior O. & G. Co.'s No. 1 Farber, 330 ft. from N and E lines of Lot 6, Nancy Dean Sur.
T.D. 6,200 ft.; 7-in. csg. 5,485 ft.; will make drill stem test.
Magnolia Pet. Co.'s No. 1 Henderson & Pickering, E offset to discovery well, Wm. Rupley Sur.
Drlg. shale 1,320 ft.

**WALLER COUNTY**

Diadem Oil Co.'s No. 1 Urban Estate, 1,100 ft. from the N line, 800 ft. from W line of survey.
Location.

**WALKER COUNTY**

Boone Bros.' No. 1-D Texas Long Leaf Lbr. Co., 330 ft. E and 275 ft. N of SW cor. of 112.6-ac. tract, Mary Millsap Sur.
Abd. 3,979 ft.
S. E. Gray's No. 1 Winzell, 1,200 ft. N and 1,000 ft. E of most southerly S line of survey.
Abd. 4,330 ft.

**WASHINGTON COUNTY**

Powers Prod. Co.'s No. 1 Boenker, 550 ft. S, 250 ft. W from NW cor. of Dodson 160 acres, J. Newman Sur.
Drlg. shale 1,210 ft.

**WHARTON COUNTY**

Texas Co.'s No. 2 Pierce Estate, 2,425 ft. S, 31 degrees 20 ft. E, 4,400 ft. N, 58 deg. 40 ft. E from W cor. of Pierce Estate Land, I.&G.N.R.R. Sur. No. 39.
Drlg. shale and lime 4,443 ft.

**SOUTH LOUISIANA**
**ACADIA PARISH**

Continental Oil Co.'s No. 1 T. Ortego, 990 ft. S, 500 ft. E of NW cor. SW¼ Sec. 28-7s-2w.
Drlg. shale 3,175 ft.
Humble O. & R. Co.'s No. 1 American Rice Mills, 660 ft. S and 1,320 ft. W from NE cor. Sec. 27-10s-1e.
Drlg. shale 8,536 ft.

**AVOYELLES PARISH**

Southern State Pet. Co.'s No. 1 Boyette, 330 ft. N and 330 ft. E of SW cor. Sec. 28-3n-5e.
S.D. 3,887 ft.

**BEAUREGARD PARISH**

Chew & Kirby's No. 1 Long Bell Lbr. Co., 330 ft. S and W of C of NE¼ Sec. 26-2s-8w.
Drlg. shale 3,310 ft.
Richardson & Martin's No. 1 Southwest Lbr. Location.

**CALCASIEU PARISH**

Fred Oil Co.'s No. 2 Faizst, 262 ft. E and 83 ft. S of NW cor. SE¼ Sec. 26-8s-10w.
Drlg. shale 3,230 ft.
Nicholas McCaleb's No. 1 Grey, 2,200 ft. S 1,200 ft. E of NW cor. Sec. 22-8s-13w.
S.D. 850 ft.
Texas Co.'s No. 5 Nickerson, 2,826 ft. N, 3,192 ft. W of SE cor. of Sec. 12-19s-8w.
Location.
Texas Co.'s No. 6 Nickerson, 287 ft. N, 289 ft. W of SE cor. of NW¼ Sec. 12-19s-8w.
Location.
Texas Co.'s No. 3 Nickerson, 2,739 ft. N, 3,760 ft. W of SE cor. Sec. 12-19s-8w.
S.D. 6,199 ft.
Texas Co.'s No. 2 Nickerson, 2,304 ft. N, 4,322 ft. W of SE cor. NW sec. 13-9s-8w.
7⅝-in. csg. 6,735 ft.; T.D. 6,752 ft.; S.D.; I.P. 500 bbls. per day through ¼-in. choke; T.P. 900 lbs.

Union Sulphur Co.'s No. 7 State, 1,316 ft. N and 199 ft. E of the SW cor. of Sec. 12-9s-8w.
Location.
Union Sulphur Co.'s No. 9 State, NW offset to Texas Co.'s No. 2 Nickerson.
Drlg. water sand 4,772 ft.
Union Sulphur Co.'s No. 1 Castle, 336 ft. N and E of NW Sec. 13-9s-8w.
Drlg. sandy shale 5,910 ft.
Union Sulphur Co.'s No. 1 Buhler, 1,465 ft. N and 425 ft. W of SE cor. Sec. 11-9s-8w.
S.D. 4,063 ft.
Union Sulphur Co.'s No. 6 State.
Drlg. shale 6,772 ft.
Union Sulphur Co.'s No. 2 Powell, 1,279 ft. S, 1,621 ft. E of NW cor. Sec. 12-9s-8w.
Drlg. gumbo 2,726 ft.
Wheeler Oil Corp.'s No. 1 School Lot, 1,708 ft. E, 1,325 ft. N of SW cor. Sec. 16-9s-7w.
Drlg. shale 3,720 ft.

**CAMERON PARISH**

Magnolia Pet. Co.'s No. 1 J. B. Broussard, 330 ft. E and S, out of NW cor. of the SW¼ of SE¼ of Sec. 13-12s-9w.
T.D. 7,244 ft., crooked hole.
Steinberger Pet. Co.'s No. 1 Drew, 330 ft. out of NW cor. NE¼ of Sec. 26-10s-11w.
Location.

**EAST BATON ROUGE PARISH**

Superior Oil & Prod. Co.'s No. 1 Duplanter-Community, 1,500 ft. westerly along the N line from the NE cor. of D. A. and E. A. Duplanter's 130.7-ac. tract, thence 330 ft. at R/A.
Stuck D.S.; T.D. 7,747 ft.; prepare to sidetrack 1,830 ft.

**EAST FELICIANA PARISH**

Thompson Creek Oil Co.'s No. 1 Fannie Noland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 70.
S.D. 1,589 ft.

**EVANGELINE PARISH**

Bazile's No. 1 Haas, 1,680 ft. S of N line, 350 ft. W of E line of NE cor. Sec. 14-6s-2w.
Drlg. shale 5,130 ft.

**IBERIA PARISH**

Texas Co.'s No. 1 State Fausse Point.
Reaming to straighten hole 4,868 ft.

**JEFFERSON PARISH**

Lincoln Oil Co.'s No. 1 Rigaud, Sec. 28-21s-25e.
T.D. 7,039 ft.; R.U. to deepen.

**LAFOURCHE PARISH**

Southern Sulphur Corp.'s No. 1 D. L. Lagraize, 800 ft. E of NW cor. of Lot 7, thence 250 ft. S of Sec. 26-21s-22e.
Spudded and shut down.

**ST. BERNARD PARISH**

Emerald Pet. Corp.'s "Shell Beach Properties" No. 1, on S edge of Bayou Louis, Sec. 31-13s-15e.
Drlg. shale 1,420 ft.

**ST. LANDRY PARISH**

C. B. Bunte's No. 1 Thistle Waite Lbr. Co., 7,590 ft. W and 1,980 ft. S of NE cor. Sec. 68-5s-4e.
Abd. 7,001 ft.

**ST. MARTIN PARISH**

Texas Co.'s No. 7 St. Martin Land, 2,042 ft. N, 500 ft. W of SE cor. of Sec. 17-8s-7e.
Derrick.
Texas Co.'s No. 1 State-Plumb Bob, 3,107 ft. E and 2,154 ft. N of SW cor. Sec. 9-8s-7w.
Abd. 8,204 ft., water sand.

**VERMILLION PARISH**

Moore Bros.' No. 1 Brussard, 350 ft. S of N line, 250 ft. E of W line, NE cor. Sec. 32-11s-3e.
S.D. 4,056 ft.

## La.-Ark. Wildcats

(Continued from Page 68)

660 ft. S, 300 ft. W, NE cor. Sec. 56-21-21e.
Drlg. 900 ft.
O. G. Collins' No. 1 H. L. Hunt, approx. center of Sec. 26-22-13e.
Drlg. 1,700 ft.

**LA SALLE PARISH**

H. L. Hunt, Inc.'s No. 1-A King, 225 ft. S, 210 ft. E, NW cor. NE NW Sec. 36-10-1e.
Rigging up.

**MOREHOUSE PARISH**

Alex Rice, tr.'s No. 1 Myers, Sec. 15-22-7.
Dry and abd. 3,035 ft.
Carbon Consolidated's No. 1 Archie, 560 ft. S, 330 ft. E, NW cor. SW Sec. 22-20-4e.
Rigging up.
Zeiger & Bacon's No. 2 Crossett Lbr. Co., 3,870 ft. N, 505 ft. E, SE cor. SE SW of Sec. 36, in Sec. 41.
S.D. 50 ft.

**OUACHITA PARISH**

J. E. Farrell & Co.'s No. 4 State of La., Sec. 50-20-4e.
Set 12-in. 84 ft.; set 8-in. 166 ft.
G. E. Gordon, tr.'s No. 4 Rea-Green, 1,078 ft. S, 1,122 ft. W, NE cor. SE Sec. 2-18-4e.
Set 8-in. 185 ft.
Pioneer Gas Co.'s No. 1 Filhoil, 2,436 ft. N, 307 ft. W, common cor. Sec. 11-18-4e.
Arranging to test, 2,215 ft.

**NATCHITOCHES PARISH**

Clyde Crichton's No. 1 Friedman Est., 406 ft. N, 428 ft. E, SW cor. Sec. 52-7-6.
Arranging test, 2,243 ft.
Ab Jones' No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. Sec. 5-10-10.
S.D. 1,033 ft.

**RED RIVER PARISH**

Sterling O. & R. Co.'s No. 1 Long Bell, Sec. 19-13-9.
S.D. 2,946 ft.
J. S. Tuffree's No. 1 Wilkinson, 1,320 ft. S and W, NE cor. Sec. 11-12-11.
S.D. 1,395 ft.

**SABINE PARISH**

G. H. Collins' No. 1-C Cranford, 330 ft. S and E, NW cor. SW NW Sec. 28-9-13.
Set 6-in. 1,465 ft.
M. T. Hines' No. 1 J. B. Hill, SW NE Sec. 4-6-11.
Set 6-in. 2,278 ft.
Laurel Pet. Co.'s No. 1 Long Bell Lbr. Co., 330 ft. N and E, SW cor. Sec. 14-8-14.
Arranging to use acid 1,974 ft.

Jack Lent's No. 1 Williams, Sec. 13-7-11.
S.D. 950 ft.
H. H. Morris, trustee's No. 1 Henderson, 330 ft. S and W, NE cor. SW NE Sec. 29-9-13.
Set 6-in. 1,542 ft.
Strickland et al's No. 1 Whitney Corp., Sec. 32-10-12.
Recmt. 8-in.; T.D. 1,590 ft.

**UNION PARISH**

Carbons Consolidated's No. 9 fee, 660 ft. N, 990 ft. E, SW cor. NW Sec. 17-21-3e.
Comp.; 500,000 ft. of gas, 2,148 ft.
Crescent Drlg. Co.'s No. 1 Woolie, SE cor. NW NW Sec. 34-19-1e.
Rigging up.
Southern Carbon Co.'s No. 67 fee, 1,980 ft. S, 750 ft. E, NW cor. Sec. 5-20-4e.
Comp.; 12,000,000 ft. gas, 2,140 ft.
Southern Prod. Co.'s No. 1 Clark, 500 ft. N and W, SE cor. NW NW Sec. 17-23-1e.
Drlg. 600 ft.

**WEBSTER PARISH**

Virgil Likens' No. 1 E. L. Stewart, 1,020 ft. E, 600 ft. S of NW cor. Sec. 23-18-10.
S.D.; rig repair, 1,890 ft.

**ARKANSAS**
**ARKANSAS COUNTY**

Grand Prairie Realty Co.'s No. 2 Fischer, 412 ft. S, 12 ft. W, NE cor. NW NW Sec. 6-6-4w.
Rigging up.

**ASHLEY COUNTY**

Glenn E. McFaddin et al's No. 1 Boreine Farms, 660 ft. S and W, NE cor. Sec. 1-18-8.
S.D. 2,800 ft.

**COLUMBIA COUNTY**

Southern States Gas Co.'s No. 1 Piney Woods Lbr. Co., 330 ft. N and E, SW cor. NE NW Sec. 10-20-22.
S.D. 960 ft.
O. F. Whittaker's No. 1 F. Hall, 330 ft. N and W, SE cor. SE NW Sec. 11-15-20.
Set 6-in. 2,042 ft.; W.O.S.R. 2,137 ft.

**GRANT COUNTY**

Neill & Winter's No. 1 Cooper, C S½ SW SE Sec. 26-6-15.
Dry and abd. 1,991 ft.

**HEMPSTEAD COUNTY**

A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26.
S.D. 1,992 ft.
F. W. Martin's No. 2 Lafferty, C NW Sec. 17-14-24.
Rigging up.

**LAFAYETTE COUNTY**

Kamon & Neely's No. 1 Cockran, NW cor. SE SW Sec. 26-19-25.
Drlg. 3,500 ft.
Riggs Bros.' No. 1 Dubose, SE cor. SW NW Sec. 35-15-24.
Dry and abd. 2,817 ft.

**MILLER COUNTY**

M. D. K. Fitzwater's No. 1 E. H. Beck, 150 ft. N and E, SW cor. NW SW Sec. 34-15-26.
Recmt. 10-in. 112 ft.; T.D. 2,200 ft.
Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 20-15-27.
S.D. 3,177 ft.
King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E, SW cor. SW NE Sec. 24-14-28.
S.D. 3,167 ft.
King Oil Corp.'s No. 1 Anderson, 350 ft. E, 200 ft. S. NE cor. SW NE Sec. 16-14-27.
Drlg. red beds 2,573 ft.
Magnolia Pet. Co.'s No. 8 Olivet, 326 ft. S and W, NE cor. NW NW Sec. 3-16-26.
Drlg. 1,900 ft.
Frank Roe et al's No. 1 Frost Est., 150 ft. N and W, SE cor. SE SW Sec. 8-15-26.
Set 10-in. 120 ft.
Lee Timberlake's No. 1 Frost Est., 330 ft. N and E, SW cor. SW SE Sec. 27-15-26.
S.D. 3,100 ft.

**NEVADA COUNTY**

Carnett et al's No. 1 Floyd Munin, C SW Sec. 16-14-23.
S.D. 50 ft.

**OUACHITA COUNTY**

F. A. Book et al's No. 1 Arnold, Sec. 24-15-16.
S.D. 2,032 ft.
Snow Black Pet. Co.'s No. 1 O. F. Wyman, NW SW Sec. 36-11-16.
Set 10-in. 101 ft.
Chas. Steele et al's No. 1 Myar Est., 330 ft. N and W, SE cor. SW SE Sec. 16-13-18.
S.D. 1,324 ft.

**SEVIER COUNTY**

Pendleton & Vaughn's No. 1 fee, 1,160 ft. S, 330 ft. E. NW cor. SE.
Set 10-in. 103 ft.; drlg. 907 ft.
Pendleton & Vaughn's No. 1 Harrison Est., 265 ft. S, 30 ft. W, CEL Sec. 34-9-30.
P.B. to 1,155 ft. to test.

**UNION COUNTY**

Gardy Drlg. Co.'s No. 1 Craig, Sec. 35-17-15.
S.D.; W.O. 2,211 ft.
Gulf Ref. Co.'s No. 49 L. Werner, 4,620 ft. N, 60 ft. E, SW cor. Sec. 5-16-16.
Drlg. 6,420 ft.
H. L. Hunt's No. 15 E. F. Gregory, 330 ft. N and W, SE cor. Sec. 10-17-14.
Arranging test 3,478 ft.
H. L. Hunt's No. 18 E. F. Gregory, 330 ft. N and E, SW cor. Sec. 11-17-14.
Derrick.
Mrs. R. K. Jones et al's No. 1 Davis, 330 ft. N and W, SE cor. NW NW Sec. 28-16-14.
Coring wtr. sand 3,129 ft.
Marine Oil Co.'s No. 3-A Union Sawmill, 330 ft. S and W, NE cor. SE SE Sec. 3-18-13.
Set 10-in. 130 ft.; drlg. 1,200 ft.
Joe Modisette et al's No. 1 D. S. Sturdevant, 330 ft. N and W, SE cor. Sec. 6-18-13.
Drlg. 4,016 ft.
C. E. Murdock's No. 1 Pumphrey, C SW NW NE Sec. 11-17-14.
Derrick.

**MISSISSIPPI**
**AMITE COUNTY**

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e.
S.D. 550 ft.

**BOLIVAR COUNTY**

White & Jones' No. 1 Ballou, SE SE NW Sec. 17-24n-7w.
S.D. 20 ft.

**CLARKE COUNTY**

L. Beckwith et al's No. 1 Long Bell Lbr. Co., 538 ft. S, 125 ft. W of C Sec. 10-2n-16e.
T.A.; lack of funds.
Clarke County Oil Co.'s No. 1 Dora Butler, C SW SW Sec. 15-2n-16e.
Set 10-in. 63 ft.

**HARRISON COUNTY**

Big Ridge Oil Co.'s No. 1 Hinzin, NE Sec. 13-7s-10w.
S.D.; W.O. 1,100 ft.

**HINDS COUNTY**

F. H. Robertson et al's No. 1 Martin, 660 ft. E, 330 ft. N, SW cor. N½ SW NE Sec. 26-6n-1e.
Testing 2,473 ft.
Bob Weaver's No. 1 T. Russell & Oparka, C NW NW NE Sec. 26-6n-1e.
Testing 2,430 ft.

**LAUDERDALE COUNTY**

Bob Dalton's No. 1 Bounds, Sec. 34-7n-15e.
S.D.; W.O. 1,600 ft.

**MONROE COUNTY**

P. J. McAlpine's No. 1 Frank Rye, Sec. 15-15s-17w.
T.A. 2,931 ft.
P. J. McAlpine's No. 1 Crook, 1,090 ft. S, 90 ft. W, NE cor. Sec. 15-13s-13w.
S.D. 2,500 ft.

**SIMPSON COUNTY**

Berry Corp.'s No. 2 R. T. Berry, Sec. 33-2n-4e.
O.W.D.D.; S.D. for fuel at 2,510 ft.

**WALTHALL COUNTY**

Mutual O. & G. Co.'s No. 1 Boyd, SW cor. SW SE Sec. 24-3n-9e.
Partly rigged up and S.D.

**WARREN COUNTY**

H. W. Elliott et al's No. 2 R. L. Parker, 780 ft. E, 1,570 ft. S, NW cor. Sec. 14-14n-1e.
S.D.; high wtr. 1,600 ft.

**WASHINGTON COUNTY**

Perkins & Dees' No. 1 Lee, 1,500 ft. E, 500 ft. N, SW cor. Sec. 33-15n-3w.
Drlg. 2,125 ft.

**WINSTON COUNTY**

Jack Vale et al's No. 1 Moody, 713 ft. N, 667 ft. E, SW cor. NW SW Sec. 3-13n-14e.
S.D.; W.O. 1,320 ft.

## La.-Ark. Proven Fields

**NORTH LOUISIANA**
**CADDO—BODESSA**

United Gas Public Service Co.'s No. 2 Caddo Levee Board, 1,126 ft. S, 25 ft. E, NW cor. Sec. 26-23-16.
Rigging up.
United Gas Public Service Co.'s No. 1 D. F. Barr, 1,320 ft. N, 1,551 ft. W, SE cor. Sec. 29-23-16.
Set 16-in. 214 ft.; drlg. 1,955 ft.
United Gas Public Service Co.'s No. 1 I. L. Young, C E½ SE Sec. 21-23-16.
Drlg. 4,968 ft.

**SABINE PARISH—ZWOLLE**

Alexander & Crane's No. 1 Fogman, SE cor. N½ SW NE Sec. 18-7-11.
Tested dry 2,416 ft.; drlg. 2,430 ft.
Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 13-7-11.
S.D. 2,120 ft.
Hunter Co.'s No. 15 Sabine Lbr., 2,640 ft. E, 1,320 ft. N, SW cor. Sec. 1-7-12.
W.O.S.R. 2,700 ft.
H. C. Maulding's No. 1 Davis, 350 ft. N and W, SE cor. NE NE Sec. 2-7-11.
Rigging up.
K. C. Peterson et al's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. SW NW Sec. 2-7-9.
Derrick down.
Texas Co.'s No. 1 Mary Cutrer, 666 ft. W, 671 ft. N, SE cor. NE Sec. 11-7-11.
Rigging up.
Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr. Co., Sec. 2-3-12.
S.D. 2,742 ft.

**EAST TEXAS (BORDER COUNTIES)**
**HARRISON COUNTY**

R. C. Payne et al's No. 1 Lowery, H. D. Spain Sur.
P.B. to 3,524 ft.

**MARION COUNTY**

Ed S. Holman's No. 1 Henderson, R. Bennington Sur.
P.B. to 2,443 ft.

**PANOLA COUNTY**

R. A. Graddy's No. 1 M. J. McCormick, J. McAdams Sur.
Moving in rig.
George Hudson et al's No. 1 J. F. Nail, C. McGeary Sur.
Set 8-in. 40 ft.; fishing for core bbl. at 2,345 ft.
Geo. Le Grand's No. 1 P. J. Wardleigh, A. Thompson Sur.
Set 10-in. 62 ft.
R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Set 10-in. 64 ft.
Fred Stovall Drlg. Co.'s No. 1 H. D. Ivey, P. Martin H.R.S.
S.D. for csg. 1,980 ft.

**SHELBY COUNTY**

Cliff Stoval's No. 1 Pickering Lbr. Co., C. H. Patterson Sur.
S.D.; rig repair, 1,485 ft.

**ALABAMA**
**COVINGTON COUNTY**

Geometer Prod. Corp.'s No. 1 Culbreath, SW cor. SW NE Sec. 8-2n-14e.
S.D.; repairing rig, 5,600 ft.

**HOUSTON COUNTY**

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e.
Drlg. 2,776 ft.

**LAMAR COUNTY**

DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 22-15s-16w.
Drlg. 4,259 ft.

**WALTON COUNTY—FLORIDA**

Geometer Oil Corp.'s No. 2 Walton Land & Timber Co., Sec. 10-1s-19w.
Drlg. core tests on block; R.U. and S.D.

# NEW AND IMPROVED EQUIPMENT

## New Revolving Die Head Is Announced by Landis

Landis Machine Co., Waynesboro, Pa., has placed on the market a revolving die head with taper attachment for producing tapered threads. This head is an

adaptation of the three-quarters inch Lanco head but has a standard capacity up to 1¼-inch American tapered pipe thread with a maximum thread length of 1¼-inch. By using special oversize chaser holders, diameters up to 2¾-inch can be cut with a maximum thread length of 1⅛-inch. Any degree of taper can be provided up to 2-inch taper per foot by using the proper operating ring and cam shoe. The head is suitable for application to practically any make of automatic chucking machine employing a revolving type of die head.

The taper cutting action is obtained through a cam which is integral with the operating ring. Attached to the closing ring of the die head is a cam shoe which is machined to correspond to the operating cam. As the threading spindle moves forward the closing yoke on the die head contacts the usual adjustable stop nut on the stop bar on the machine just as the chasers begin to form the thread. At this point the forward travel of the operating ring is retarded while the die head itself continues to move forward to produce the thread. As the die head continues to move forward onto the work this construction causes the chasers to open gradually, thus generating a tapered thread. When the cam shoe has traveled the full length of the cam on the operating ring the die head automatically opens. Adjustment for thread length is obtained by properly setting the stop nut on the stop bar.

Since the forming and the finishing of the thread is done by the first few teeth on the chasers, cutting strains are no greater than would be required for cutting a straight thread of corresponding diameter. Furthermore, the length of a tapered thread which can be cut is not limited to the width of the chasers, but is controlled only by the length of the cam travel. The result of this free cutting action is a better finish on the thread as well as a longer life for the chasers.

### ADOPTS BETHANIZED WIRE

The Anchor Post Fence Co., Baltimore, Md., manufacturer of chain link fence, has adopted Bethanized wire for both fence fabric and barbed wire. According to its manufacturers, this new wire has a protective zinc coating that is 99.997 per cent pure. The coating is applied to the steel base wire by means of a newly developed electrolytic process that deposits the zinc in perfect uniformity to all parts of the wire surface.

## Notes About Trade Literature

Worthington Pump & Machinery Corp., Harrison, N. J., will send on request a bulletin covering its automatic self-priming monobloc centrifugal pump, which has no floats, hand-operated valves or recirculation, and a bulletin on its horizontal two-cycle oil field type gas-oil engines.

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Murex electrodes are the subject of a 16-page booklet obtainable from Metal & Thermit Corp., 120 Broadway, New York.

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A mailing piece prepared by the Hinderliter Tool Co., Tulsa, describes and illustrates that company's rotary pack-off tool joint, designed to prevent thread leaks.

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A new edition of Bulletin AD-114, a two-color, 32-page booklet, issued by the Binks Manufacturing Co., 3114 Carroll Avenue, Chicago, gives prices and descriptions of additions to the Binks line of spray equipment. New developments described include the Thor Model 5 touch-up gun with adjustable spray head and overhead trigger and the Thor Model 6 touch-up and general utility gun.

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A new packing for sealing liquids and gases is described in a bulletin obtainable from Crandall Packing Co., Palmyra, N. Y.

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The 1935 catalog of the Safeway Packer Co., Box 514, Tulsa, is ready for distribution. It covers the Safeway pumping packer, bottom-hole choke, flow packer, liner hanger and other products of the company.

—

"Proving by Performance With Caterpillar Diesel" is the title of an attractive folder issued by the Caterpillar Tractor Co., Peoria, Ill.

—

Mid-rip PO 8J leaflet, ready for distribution by General Cable Corp., 420 Lexington Avenue, New York, describes a new lamp cord suitable for industrial use and fully approved by Underwriters' Laboratories.

A bulletin issued by Kropp Forge Co., 5301 West Roosevelt Road, Chicago, covers drop forgings "to your specifications."

—

Solenoid valves for automatic and remote control of steam, gas, air and liquids are described in a 24-page catalog obtainable from Automatic Switch Co., 154 Grand Street, New York.

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Two pieces of literature announced by the Allis-Chalmers Manufacturing Co., Milwaukee, Wis., are leaflet No. 2100, "Wound Rotor Induction Motors," and leaflet No. 2183, "Type E Direct Current Motors and Generators."

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The current number of Nickel Cast Iron News, published by International Nickel Co., Inc., 67 Wall Street, New York, contains among articles of special interest to the oil industry "Nickel Alloys in Petroleum Equipment" and "Oil Man Joins Inco Research."

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The Lane Wells Co., Los Angeles, Calif., has opened branch offices in the Philcade Building, Tulsa, and shop quarters at 1321 South Walker Street, Oklahoma City, which will be the seat of the company's operations in the Mid-Continent territory for the gunfire perforating service.

—

The O-Ne-Li-Um Chemical Co., Inc., New Orleans, La., is sending to inquirers literature explaining its new anti-rust compound, O-Ne-Li-Um, which is said to stop, prevent and destroy rust above or below ground or water, fresh or salty, and is not affected by acids.

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The General Electric Co., Schnectady, N. Y., is sending on request an addition to its series of loose-leaf folders. This one is on a high-speed oil-tight circuit-breaker for 50,000-kva service.

—

Shale shaker screens for reclaiming and conditioning rotary drilling mud are described in a bulletin obtainable from Allis-Chalmers Manufacturing Co., Milwaukee, Wis.

## Better Distribution of Lead in Bearings and Bushings

A new method of attaining better distribution of lead in bronze bearings and bushings has been introduced to the oil industry by Bronzoid Lead Corp., Dallas, Tex. The manufacturers are producing Bronzoid treated lead, following exhaustive tests made in oil tool manufacturing plants throughout the country and also on operating equipment in the field. This treated material is distributed to the trade through licensed bronze dealers.

The purpose of Bronzoid treated lead is to secure a better distribution in order to prevent early scoring or overheating of bearings or bushings.

Results of field tests are illustrated in the two bearings shown, one with and one without the new lead distribution process. At the right is a high lead bronze bearing which was run at high speed, along with the untreated bearing, without any lubrication.

## Men Well Known in the Equipment Field

Murray Tool & Supply Co., Inc., of Tulsa, has made E. E. (Finey) Finefrock director and sales manager. Mr. Finefrock's experience in the supply business began in 1916. For 12 years, excepting two short periods, he was with Oil Well

E. E. FINEFROCK

Supply Co., first as a helper-machinist, becoming shop superintendent and special sales representative, covering the entire Seminole territory, which position he held at time of leaving Oil Well in 1928.

Beginning March 1, 1928, with Murray Tool & Supply Co., as sales and service engineer on Wilson-Snyder pumps in the Seminole territory, Mr. Finefrock was transferred to Oklahoma City and promoted to store manager, which position he held up to the time of his promotion to sales manager.

Murray Tool & Supply Co. is distributor for well-known oil field equipment, including the Doheny-Stone Hydril machinery.

## "Camel Back" Truck Built by Four Wheel Drive Auto

The Four Wheel Drive Auto Co., Clintonville, Wis., has released a new model referred to as the "Camel Back" and listed technically as Model X6 Special.

The new truck is designed for petroleum transportation and for various hauling activities where high speed and quick manipulation of heavy and bulky loads are desired.

The cab is set over the engine to give maximum space for pay-load, and still preserve a relatively short body length, which helps to solve the driver's problems where turning and parking space is at a premium. There can be perfect distribution of load weight, with "waste" space reduced to a minimum.

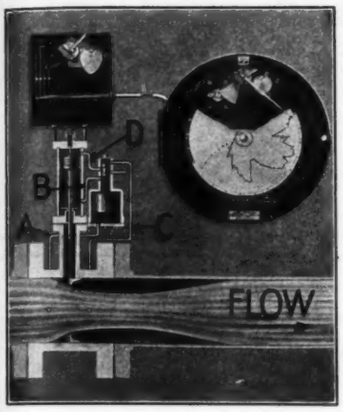
Safety, as well as maneuverability, is increased by setting the front axle back 42½ inches from the line of the front bumper.

The "Camel Back" is equipped with six wheels and three axles, each axle carrying exactly one-third of the load.

Power is applied in equal degrees on the front axle of the truck and the front axle of the bogey. Thus, because the weight is equally distributed the traction on all driving wheels is the same. Braking force is exerted equally on all six wheels.

## New Type of Flow Meter Utilizes Varying Orifice

A new type of flow meter, which utilizes a varying orifice, is now being manufactured by the Elgin Softener Corp., Elgin, Ill. As the flow of steam, water, oil, or other liquid or gas varies, the orifice opens and closes. Measurement of flow through a pipe usually has




been based on variation in the pressure drop across a fixed orifice in the line. In the Elgin isometer a constant pressure drop is maintained by changing the orifice opening. The flow is then accurately determined by measuring the degree of orifice opening at any instant.

It is asserted that the varying orifice principle of operation makes it possible to measure low rates of flow accurately down to 2½ per cent of the meter capacity. It is said also that pulsating flows can be measured more accurately. Errors due to friction are said to be eliminated because the power of the actuator is far in excess of that actually required to move the orifice gate and the metering units are electrically driven.

The movement of the orifice gate and the changing of that movement into an electrical impulse, that can be registered by remotely located indicating, recording, or totalizing electrical meters, has been worked out in an ingenious way, shown in the accompanying schematic diagram.

## Device Breaks Up Paraffin Congealed in Well Tubing

According to R. M. Humphreys, assistant director of sales for the Axelson Manufacturing Co., favorable reports are received on the Axelson guide-type sucker rod coupling with paraffin scraper. This device, constructed of hardened and ground steel, guides the rods in the tubing and provides ample fluid passage.

To break up paraffin congealed within the tubing, Axelson engineers designed the paraffin scraper coupling. It is manufactured from the same material used in an Axelson hardened and ground sucker rod coupling, namely, nickel-molybdenum alloy steel. Controlled heat treating operations and extreme care in manufacturing processes are said to have resulted in the guide-type couplings being equal in all respects, from an operation and service life standpoint, to the regular hardened and ground sucker rod couplings. Axelson representatives assert that these couplings assembled in the sucker rod string will increase sucker rod and tubing life, as well as reduce power costs.

A simple mechanism which permits the operator to weld and turn pipe simultaneously is explained in an article in the May issue of Oxy-Acetylene Tips, published by Linde Air Products Co., 205 East Forty-second Street, New York.

# Among the Equipment Houses

R. B. Millard, for 18 years with Southwestern Engineering Co., has been made chief engineer of Vulcan Steel Tank Corp., Tulsa. Mr. Millard will be in charge of design and construction of refinery and natural gasoline plant equipment.

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Atlas Supply Co., Muskogee, Okla., has opened a sales office in the Union National Bank Building, Wichita, Kans., with Ed Robertson in charge. R. A. Johnson, Wichita, is district manager. The company has stores in Bushton, McPherson and Russell.

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Joseph A. Coy has opened an office in Tulsa at 502 Kennedy Building, and will represent the Star Manufacturing Co., and Mattison-Wallack & Co., both of Oklahoma City, Okla.

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The Mid-Continent Supply Co., Fort Worth, Tex., has been appointed Mid-Continent distributor for Naylor products. Naylor spiral-weld casing will be carried in stock at various points throughout the Mid-Continent Field.

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William R. Van Nortwick, for years identified with boiler and combustion work, is now in the boiler sales division of the Henry Vogt Machine Co., Louisville, Ky.

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M. G. McCool is now representing American Iron & Machine Works Co., Oklahoma City. John Riley, sales manager for the company, recently started on a trip with Mr. McCool through West Texas and New Mexico. Midland, Tex., is their headquarters for this territory.

John R. Webb, representative of the Axelson Manufacturing Co., in Buenos Aires, Argentine, is at the company's Los Angeles, Calif., plant, familiarizing himself with the latest manufacturing methods and oil field procedure.

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Ben Morey, formerly president of Morey & Jones, Ltd., of Los Angeles, Calif., has joined the staff of the Lane Wells Co., manufacturer of oil tools and operators of gun perforator service.

—

Westinghouse Electric & Manufacturing Co.'s annual meeting of stockholders re-elected Winthrop W. Aldrich, H. B. Rust and Samuel M. Vauclain directors. John L. Hall, senior member of the law firm, Choate, Hall & Stewart of Boston, was elected a director.

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The Chicago offices of De Laval Separator Co., from which all the De Laval middle western business is handled, have been moved to 427 Randolph Street.

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Worthington Pump & Machinery Corp. has appointed J. E. Holveck as special sales engineer, operating from its Pittsburgh, Pa., office but with his territory including the Cleveland, Detroit, Chicago and Buffalo areas.

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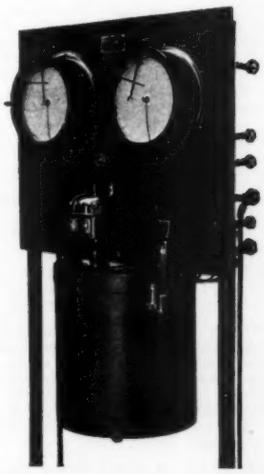
Merger of the Swann Corp. into the Monsanto Chemical Co. will become effective on the filing of the necessary papers. Swann and its subsidiaries operate manufacturing plants in Anniston, Ala.; St. Louis, Mo.; and Camden, N. J., and are principally engaged in the electrochemical production of phosphoric acid and its derivatives, calcium carbide, ferro phosphorous and abrasives.

## "Tag" Has Rights for New Vapor Pressure Recorder

The C. J. Tagliabue Manufacturing Co., Brooklyn, N. Y., has obtained the exclusive world-wide manufacturing and sales rights for a new vapor pressure



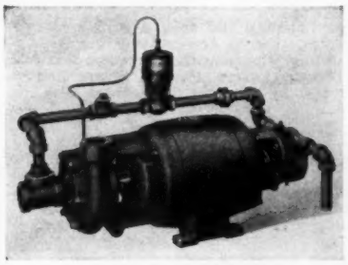
recorder, a development of Industrial Engineers, Inc., of Los Angeles, Calif., under the Kallam patents and to be known as the Tag-Industrial Engineers continuous vapor pressure recorder.

It is possible with this recorder to have a continuous record of vapor pressure instantly available. As vapor pressure is the most important single factor in the manufacture, blending and shipping of light petroleum products, the utility of this device will be appreciated.

As is usual with Tag Instruments, it is now offered after five years of experimental and development work and several years of plant service. It is fully described in Bulletin No. 1115, which the company will send on request.

## Offers Self-Priming Pump Without Floats or Valves

A pump that will prime itself when necessary has been sought for sumps, cellars, isolated water supply, and numerous



industrial plant services. The problem is said to have been solved by engineers of the Worthington Pump & Machinery Corp., Harrison, N. J., through the use of the Worthington-built Hytor, a positive primer, placed on the same shaft with the motor and pump. The only requirement is a reasonably tight suction line.

When the pump, embodying the latest and most efficient impeller design, is primed, a pressure-operated cut-out automatically unloads the Hytor. There is no recirculation of water. There are no floats or valves. The priming apparatus has been exhaustively tested for 10,000 starts, equivalent to more than 30 years of operation under most service conditions.

The unit is compact, with a sturdy splash-proof, stream-lined motor, all on a symmetrical mounting. The pump is available for single or polyphase 50 or 60 cycle alternating current as well as for direct-current operation.

Ross Heater & Manufacturing Co., Inc., has moved its New York office to 40 West Fortieth Street.

## Core Drill Designed for Fast Work and Long Life

The central core drill, a newly designed, truck-mounted drilling machine, was developed by Central Core Drill Manufacturing Co., Hutchinson, Kans., for the rapid drilling of blast holes in connection with the seismograph method

of oil field exploration and survey. It is also suitable for deep core drilling or shallow production work, the unit being light but constructed in such a way as to make it very strong. Low operating costs and long life are assured, according to the manufacturer, through the fact that all working parts run in oil, are enclosed and are dustproof and waterproof.

The outfit consists of a drilling and hoisting unit, a circulating pump, a power-driven hoisting drum or winch and a collapsible mast. These units are arranged for mounting on the platform of a motor truck and are driven by a gasoline engine mounted with the unit, having a four-speed forward and one reverse gear in the transmission, giving a wide range of gear speeds.

The drilling and hoisting unit combines a hydraulic pressure feed, installed in the mast for forcing the kelly through a rotary table and a winch or hoisting drum mounted on the drill bed or frame for hoisting or lowering the string of drill pipe or casing. The drilling spindle (or kelly) is 11 feet long and is rotated through a rotary table.

The kelly being 11 feet long allows 1 extra foot at the bottom of the hole for cuttings to settle when the tools are run back into the hole, thus leaving enough room for settlings so there is no danger of blocking the circulation of the bit. In the lower end of the kelly joint is placed a tool joint, which may be changed to fit any size drill pipe, all sizes of bushings being furnished with the drill.

The hydraulic cylinders have a full 11-foot strike, allowing the driving of a full 10-foot joint of drill pipe without any stopping to return the hydraulic feed to the top of its stroke or for chucking.

### AGREEMENT ANNOUNCED

An agreement, applying only to the sale of industrial electro-chemical instruments and certain types of flowmeters, has been consummated between Leeds & Northrup Co. of the United States and George Kent, Ltd., of Great Britain. Under this arrangement Kent will not offer its industrial electro-chemical instruments or its flowmeters for sale in the United States or Canada unless through Leeds & Northrup, while Leeds & Northrup will not offer its similar instruments for sale in the British empire (except Canada) unless through Kent. Neither the sale in the United States by Builder's Iron Foundry, of Kent venturi and shunt type rotary meters, nor the sale anywhere by either company or its agents, of products other than those specifically mentioned is in any way affected.

# CLASSIFIED ADVERTISING

*For Sale—Equipment* *For Sale—Equipment* *For Sale—Equipment* *For Sale—Equipment*

We offer for sale the entire plant and equipment of the

## Continental Oil Refinery—Sapulpa, Oklahoma

at salvage prices. Seldom has such late type Topping and Cracking equipment been dismantled. Every item in excellent condition and offered at a fraction of original cost.

### Boiler Plant

4—525 H.P. Babcock & Wilcox Boilers, Water Tube, Foster Superheaters, Bayer Soot Blowers, Copes Regulators, Lagonda Stop Valves, Bailey Boiler Meters, etc. Last inspection rated 160 lbs. pressure. Unusually fine condition.

### Hot Oil Pumps

Made by leading manufacturers, National Transit, Byron Jackson, Worthington, Pacific, etc. Powered by Electric Motor, Steam Turbine and Cross Compound Condenser type Steam Engines. Capacity from 160 to 500 G.P.M.

### Crude Charging Pumps

Byron Jackson Centrifugal Pumps, powered by Electric Motors and Terry Steam Turbines, Kinney Rotary Gear Driven, powered by Electric Motors, Worthington Steam Pumps. Capacity 70 to 725 G.P.M.

### By-Product Recirculating Transfer Pumps

Pacific Horizontal Split 2 stage centrifugal pumps and Byron Jackson 2 stage Centrifugal Pumps, powered by Electric Motors. Capacity 50 to 250 G.P.M.

### Braun Heat Exchangers

22—Braun Heat Exchangers and Coolers. Capacity from 500 to 1200 Cu. Ft. Also Ross and Cross Exchangers.

### Complete Gas Absorption Plant

Designed to operate at 60 lbs. pressure. Capacity 100 bbls. day. Includes Gas Separator and Steam Towers, Scrubbers, Accumulator and Depropanizing Tanks, Electric Recording Instruments, Ingersoll-Rand Compressor, Electric Driven and Steam Driven Pumps, Steam and Liquid Pressure Control Instruments, and Braun Preheaters, Condensers and Heat Exchangers.

### Complete Continuous Treating Plant

Caustic and Water wash Towers and Doctor Solution Towers, Caustic Melting Tanks, and Air Agitated Caustic Mixing Tanks, Acid Blow Cases, Caustic Pumps, Acid Storage Tanks, Heavy plate, riveted, Sulphur Gasoline Drums, etc.

### Control Instruments

3—Complete control rooms containing Brown Electric Temperature recording Pyrometers and Flow Meters, Westcott Flow Meters, and Foxboro air actuated instruments. All instruments equipped with relay, electrically and mechanically controlled valves. Complete with thermo couples, wire, tubing, etc. Limited space prevents full listing, but nearly every requirement can be met.

Many other items too numerous to mention such as FOSTER WHEELER TUBE STILL, FRACTIONATING BUBBLE TOWERS, CENTRIFUGAL WATER PUMPS powered by electric motors, AGITATORS, STEAM PUMPS, FIRE PUMPS, FIRE FIGHTING APPARATUS, CONDENSER AND COOLING BOXES, STEEL STORAGE TANKS, CRANE and WALWORTH STEEL VALVES and FITTINGS, 100 miles of PIPE LINE from ¾" to 12", etc., etc.

WRITE FOR FULL DESCRIPTIVE CIRCULAR

**BROWN-STRAUSS CORPORATION**

Mail address, P.O. Box 220, Sapulpa, Oklahoma. Phone 1476.

Home Office and Plant—Kansas City, Missouri.

## LIQUIDATING ENTIRE ALTITUDE REFINERY

Located at Chanute, Kansas, cost over a million dollars, operated until Feb., 1935. Will sell all or any item in plant consisting of 2—1000 bbl. each Jenkins Cracking units, 5000 bbl. capacity skimming unit, 2000 bbl. Winkler Koch pipe still. Over 100 pumps of all kinds, condenser boxes, heat exchangers, 150,000 bbls. of steel storage tanks from 100 to 55,000 bbls., many miles of all sizes pipe, 50,000 valves and fittings Oakite treated. Complete laboratory equipment, complete stock of new repair parts. Inventories furnished on request.

Wire, phone, or write W. C. Berry or H. J. Galamba.

**SONKEN-GALAMBA CORPORATION**

64 North Second Street, Kansas City, Kansas.

138,100 ft. 6" Standard 19 lb. pipe, line couplings and complete pumping station. 2—150 H.P. DelaVergne oil engines, direct connected to 2—5½"x 16" Gould triplex vertical pumps 1000 lbs. pressure. All necessary equipment. 2—24'x80' steel buildings with overhead cranes in each. All pipe and equipment in station same as new. Will sell all or any part. Located in Kay County, Oklahoma, 4 miles south of Tonkawa on highway 177. Cash or terms. Also offer 60,000' of 19" OD and 40,000' of 16" OD welded steel pipe. Wire, phone or write.

**SONKEN-GALAMBA CORPORATION**

64 North Second St., Kansas City, Kansas.

5—Bessemer 80 H.P. Natural Gas engines, type 8, single cylinder, engines and compressors, 4 with 14"x20" cylinders and 1 with 7½"x20" cylinder, located at Magna City, Kansas. Price $600.00 each.
6—Bessemer 70 H.P. Natural Gas engines, belt driven, price $400.00 each.
5—Ingersoll-Rand Compressors, 2 cylinder, belt driven, with 12"x12" and 13½"x12" cylinders, price $400.00 each, located at Bloomington, Kans.
All of the above equipment guaranteed in A-1 condition and special price made on five or more.

**SONKEN-GALAMBA CORPORATION**

64 N. Second St., Kansas City, Kansas.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

FOR SALE, 150 H.P. Model R61 Climax drilling engine. A-1 condition. General Machine & Supply Co., Wichita Falls, Texas.

4—300 amp. Lincoln Engine driven welder. A-1 condition. Stationary type. Service Co., 3732 Cedar, Cleveland, Ohio.

TWO 50 H.P. Bessemer Gas Engines, one twin cylinder 45 H.P. Bessemer Gas Engine, enclosed type, two cycle, completely rebuilt with new piston rings, magnetos, lubricators, etc. Priced right for quick sale. Located at Burrton, Kansas. Address Box G-601, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE, 2 Weber Diesel Engines; 50-HP, used four months, $650.00; 80-HP used twelve months, $850.00. Hobson-McFarland Tractor Co., 2131 Washington St., Kansas City, Missouri.

FOR SALE—One Cleveland baby ditcher with transport truck for same. Cheap for cash. Address Box G-702, The Oil and Gas Journal, Tulsa, Okla.

### *Patent Attorneys*

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE!
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WANTED
6 Miles Good 6 Inch I.D. x 6⅝ Inch O.D. Line Pipe 17-lb. or more, beveled for welding and in double random lengths. Will buy pipe in ground or ready to ship. Wright Brothers, Clarksburg, W. Va.

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SALESMANAGER
Has representatives calling on all oil companies, refineries and gasoline plants wants other lines for West Coast. Have warehouse facilities. Address:
BOX G-692
The Oil and Gas Journal
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WANTED LOAN $60,000.00 for 5 yrs. for funding indebtedness and lowering interest payments and furnishing additional working capital for a manufacturing plant established 25 years making recognized high grade oil field equipment.
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EXPERIENCED oil man desires contact Mid-Continent, Texas, Louisiana or Gulf Producer and/or Refiner capable supplying large quantities crude, kerosene, gasoline, fuel, furnace, distillate, for distribution New York/Boston area also export. All details bulk transp., storage, selling, handled through med. New York off. Interv. solicited. Address Box G-701, The Oil and Gas Journal, Tulsa, Okla.

### *Financing*

PROSPECTUSES prepared and deals shaped up for registration or exemption under Federal Security Act. Fee basis. John Morris, Seventh Floor, 1237 Market St., Philadelphia, Pa.

MILLER, 604 W. Seventh St., Tulsa, Okla. Prospectus preparation and presentation. General assistance in all marketable matters. Correspondence invited.